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Addresses.

THE STUDY OF PEDIATRICS IN ITS RELATION TO MEDICAL EDUCATION.*

THOMAS MORGAN ROTCH, A.B., M.D.
PROFESSOR OF PEDIATRICS, HARVARD UNIVERSITY.
BOSTON.

As our knowledge of the various branches of medicine increases through the great advances which are being made in the methods of scientific research, it becomes more apparent that every branch of medicine has been more or less imperfectly studied by and taught to the student of medicine before he enters on his life's work. It is therefore necessary almost every year to pay especial attention to broadening and perfecting the medical curriculum of our university teaching. What is true of one branch of medicine, holds also with the others, and I shall speak to you to-night on the subject of pediatrics, merely because I happen to represent this department in one of our eastern universities, Harvard. In no way do we so well acquire experience in, and add to our knowledge of, a subject as by attempting to teach it and by being brought into close contact with the active minds of young men in their early twenties, especially when, as is the case at Harvard, all of them are graduates from recognized universities and hold an A.B. or an equivalent degree. In no way are we so greatly stimulated to add, year by year, to our knowledge of the subject which we are attempting to teach as by being met year by year by a new set of these young men.

It is for this reason that I enter, with a great deal of enthusiasm, into the description of the methods which we have adopted in teaching at Harvard and the ideals which we hope in the future to attain. I happen to have had a somewhat extended opportunity for teaching the subject of pediatrics, and the development of this branch of medicine, having been connected with the teaching body of Harvard University for the past twenty-five years. I have seen the teaching of pediatrics from the time that it existed only in the department of general medicine and when it was taught only in a few lectures, given by the professor of the theory and practice of medicine, these lectures being interspersed in his teaching of the medicine of adult life. I have seen the beginning of separate teaching of children alone, represented by a class of half a dozen students, once or twice a week for half of the medical year. I have seen the subject of pediatrics then become an elective with the students, so that they had to choose between gynecology and pediatrics. I have then seen the class increase from one-half its numbers to the entire class, through the establishment of a separate department for pediatrics, with its required examination for a degree, and the teaching first placed in the hands of an instructor, then of an assistant professor in the faculty, and finally of a professor of pediatrics, the subject thus becoming a recognized department, on a par with the older and more established subjects representing the various departmental divisions of the Harvard faculty.

It is rather remarkable, from a pedagogic point of view, that the special study of children has not only for so long a time and in so many universities held such a minor position, but also that it has been so difficult to attain proper recognition for this important department of medicine without unceasing vigilance and arduous work, not only in promoting the scientific side of the subject and thus improving the teaching, but most of all in contending against the opposition to its recognition by the older and established departments with their endowed professorships. Such, however, is the case, and if we look over the principal centers of medical teaching in this country it will be seen how true it is that in almost every case an insufficient amount of teaching, as to time, is given to the medicine of early life, how inadequate are the opportunities for this teaching in the various schools, and often how lacking is the knowledge which the teachers themselves have of the subject. This, in many cases, is owing to pediatrics having been taught by men who, as experts in other branches, have a reputation, but who, evidently, have had but a small amount of instruction themselves in this branch. Thus we have seen and will at times see the teaching of children a part of the course on obstetrics or on gynecology, or, as is usually the case, in the province of general medicine. There is no doubt that it is in general medicine that the teaching in regard to children is best placed from a theoretical standpoint.

We have heard it said that under one head there could be a department devoted to the clinical medicine of all ages. If, however, we appreciate the number of hours which it is necessary to devote to the clinical pathology and symptomatology of adult life, and believe that an equal number of hours and the same opportunities for acquiring the knowledge of the pathology and symptomatology of early life are necessary, it is evident that it would simply be impossible practically to have one professor do justice to such a broad range of clinical medicine, in fact, such a professor would have to be a man of such education and such mental caliber that it would be exceedingly rare to find him in any part of the world. The number of hours in the day would have to be doubled if one man should devote his time to teaching all branches of clinical medicine, and many hospital

* An address delivered by request of the Chicago Pediatric Society, at a joint meeting of that society and the Chicago Medical Society.

services would necessarily have to be taken in order to keep properly abreast of the advances which are being made in the different branches. Again, such broad subjects as neurology, obstetrics and gynecology may, in the same way, be classed under the head of general medicine. The term "professor of clinical medicine" in our universities is evidently a misnomer, as there is a clinical medicine of so many branches that, as I have just stated, it would be impossible to have these branches well covered by one man, even if such a man simply superintended the teaching of them. Such methods would be very unsatisfactory, and he would continually find that, unless he could have time and opportunity for teaching in the various hospitals devoted to the especial branches, he would inevitably fail to keep abreast with those who were studying these branches in especial hospitals and who would soon fail to recognize him as their chief. It has become very evident, therefore, that a number of subdivisions of general clinical medicine must not only be recognized in the teaching curriculum of any advanced medical school, but that it must be insisted on that the teaching of these various divisions should be fostered in the special hospitals where the greatest opportunities are given for the study of them, and that physicians should be appointed to these hospitals who not only will best serve the patients, but will also, from their general education, personal enthusiasm and capabilities, best impart to the student of medicine the practical knowledge of diagnosis and common sense treatment, which can only be obtained in this way.

It is often asked wherein the diseases of children differ from the diseases of adults, and much skepticism as to such difference exists in the minds of those who have had little opportunity for studying clinical medicine, both in the large general hospitals devoted to adults and in the hospitals devoted to the early periods of life. The fact is that, with very few exceptions, there are no diseases of children; diseases *of* children is a misnomer; what we have to deal with is a manifestation of diseases as they occur *in* children. The disease, or, rather, the cause of the disease, is the same, whether it be in later or earlier life. It is the differences that occur in these diseases, according to the period of life when they are studied, that makes so very difficult the teaching of the pathology, symptoms, diagnosis and treatment of old age, of fully developed adults, of adolescence, of children in the early period of childhood, in the middle period of childhood, of infants in their second year, in the middle or latter part of their first year, in the early months, weeks or days of early life, and of premature infants. If we appreciate the great clinical differences in these periods, great in their extent, broad in their scope, important in their relations, we can not but be forced to a conclusion that a problem quite large enough for one man at present to deal with is presented by the clinical medicine of old age, of fully developed adult life, and of adolescence, and for another of the different periods of childhood and infancy.

So far as the name of the department devoted to the study and teaching of children and infants is concerned, it really makes very little difference under what name we teach, provided that sufficient proportionate time be given to each branch by the men who have the greatest opportunity for studying and improving their knowledge of these periods of life. At Harvard we have decided to use the name pediatrics, a word meaning the hygienic or medical teaching of children. The medical societies devoted to the study of children have adopted this name; the medical journals devoted to the diseases of early life have also assumed this name. We should understand, therefore, that there is a clinical medicine of early life from birth to adolescence.

If we decide that there are no, or few, especial diseases of children, but that our province is to teach clinical medicine according to the age and stage of the development of the patient, the study of pediatrics becomes much simplified. The more, however, that we study the conditions of early life, both in health and in disease, the more are we impressed by the breadth of the subject, and the more are we convinced that a much larger amount of time should be given to it before a student can be expected to intelligently diagnosticate its diseases and practically treat them. At Harvard the subject of pediatrics is taught through the whole third year, and is soon to become a part, also, of the fourth year, when opportunities will be given for advanced teaching. The idea which is at present held with us, is that the best method of teaching, and the one which will be carried out after the new medical school buildings and the hospitals connected with them have been finished, will be somewhat as follows:

In the first place, we recognize that the most thorough and systematic study and treatment of disease at the different periods of life can be best accomplished by having, so far as is possible, these different periods of life taken care of in separate hospitals. Where infants or young children have in the past been treated in connection with adults, it has almost invariably happened that in the hospital management most attention has been paid to the later period of life, at the expense of the earlier. We, therefore, expect to have, in connection with the Harvard Medical School, a children's hospital and an infants' hospital, entirely separate from each other and from the general university hospital for adults. In like manner, we have learned by experience that where it has been attempted to arrange a hospital régime for both children and infants, it is the infants who are most likely to suffer, such a great difference between these two degrees of development exists in the amount of air space needed for the individual, in the requirements for the laundry, in the number of nurses, and lastly in the method and precision of feeding. It has, indeed, been found that much greater advances in the study of and in the care of infants can be obtained by having them under entirely separate hospital management. So far as university medical teaching is concerned, it is as important to treat these different classes of cases in different buildings as it is to have separate laboratories for physiology, bacteriology and chemistry.

It would be impossible in one evening to enumerate all the phases of the different diseases which in early life markedly differ from the manifestation of disease in later life. A slight review, however, of the differences which have been impressed on me as important, and the fact that such differences exist and require much time to teach will perhaps be of interest to you. From the very beginning of my studies in pediatrics I have been impressed with the idea that a knowledge of the anatomic and physiologic conditions which exist in the early periods of life is the keynote to the proper understanding of the diseases of this early period and is of prime importance for its diagnosis and treatment. I might mention as important anatomically, the open petro-squamosal suture which exists and continues to exist in the first two or three years of life, and that

this anatomic condition, in connection with the great proportionate vulnerability of the infant to infection of the middle ear, makes possible a variety of cerebral symptoms which are seldom seen in later life, while at this early period they are very common. These symptoms can only be thoroughly understood and intelligently dealt with when we appreciate the value of this anatomic condition. Again, a knowledge of the greater frequency of adenoid growth at an early period of life, carries with it the explanation of the symptoms of many abnormal conditions which otherwise would fail to be understood unless this tendency to lymphoid growth were recognized. Again, the recognition that in early life the bladder is an abdominal, and not a pelvic organ is of importance to the surgeon, while the greater proportionate length and freedom in motion of the mesentery is of the greatest significance in regard to the intussusceptions, which are so much more common in infants than in the later stages of development. In like manner the greater proportionate length of the sigmoid flexure in early infancy, and the continuation of this condition to a later period becoming an error of development, with its accompanying symptoms connected with rhachitis, illustrates how the diagnosis of many diseases would be very obscure unless these anatomic conditions were recognized. The development of the bones and the different periods of ossification, present to us anatomic facts which are of great aid in the diagnosis of the period at which certain diseases develop, and has, in cardiac diseases, aided us in differentiating congenital from acquired lesions of the heart. I refer to the displacement of the sternum, which, when produced by intrathoracic pressure, takes one or the other form according to the period of ossification of the different parts of the sternum, in relation to the time when the cardiac disease began. A careful study of the various investigations which have been made in the physiologic laboratories, shows that the physiologic conditions which normally occur at different periods in early life are of the utmost importance in connection with the treatment of the diseases which arise at these periods.

It is not only the physiologic investigations in connection with gastric and duodenal digestion which plays so great a rôle in the various disturbances of early life, but also the studies which will in the future be carried to still greater perfection in connection with the unstable nervous system of early life, and the undeveloped conditions of the nervous centers. There is not much doubt, also, that a special study should be made of the pathologic conditions which arise in early life, a knowledge of which is of the greatest aid, not only for the intelligent treatment of the organs affected, but also in the aid which it gives us in determining the prognosis of the especial diseases. The wonderful recuperative power of the kidney in the early periods of life, is an instance of this, and makes the pathologic study of the various forms of nephritis as well as of functional renal diseases extremely interesting and important.

The pathologic conditions connected with the three most important diseases of nutrition which occur in early life, and which have a peculiar significance in the clinical medicine of that period, namely, infantile scorbutus, infantile atrophy and rhachitis, present only a small part of the immense amount of especial study which is needed for these diseases which primarily only occur in early life, but the results of which are found at a much later period of development.

Again, in studying the diseases where there are decided pathologic lesions of special organs we must recognize the varied forms of meningitis or of simple cerebral irritation which occur so much more frequently among infants and young children than in older children and adults. The study of the different organisms which produce so readily and so frequently cerebral symptoms in early life opens up in itself an immense field of investigation, a field which can best be studied in the wards of hospitals devoted to infancy and to childhood. The variety of lesions and of symptoms which occur in the pneumonias of infancy are so great in number that they form a special clinical medicine in themselves. The mixed infections, so much more common in early life than at a later period, illustrate this statement and teach us that a knowledge of the pneumonias of later life are entirely inadequate for the symptoms, diagnosis and prognosis of an earlier period. Again, we may mention the susceptibility of the heat centers in infants and young children to the action of very cold baths and to ice bags applied to the head, by which the vitality of the patient is so frequently lowered as not infrequently to cause collapse, whereas in later life the same treatment might be used with benefit.

The proper appreciation of infantile eclampsia in all its varied forms and with its manifold etiology calls for a study of many years to be fully understood, and shows us that this condition often arises from entirely separate causes from the eclampsias of a later period, in that it so often depends on the anatomic and physiologic conditions as only exist in early life, and which lose their significance at a later period.

Another set of diseases which causes not only many symptoms connected with an early period of development, but also presents the most serious results from its terminal processes in later life, is a certain class of infectious diseases, such as scarlet fever, diphtheria, measles, pertussis, varicella and others which illustrate this statement. In this connection it is extremely interesting to observe the cardiac dilatations secondary to and the cardiac hypertrophy tertiary to scarlet fever. These serious conditions are far more common in infancy and childhood than at a later period, and this class of diseases is so much more frequent in children than in adults that they may almost be called diseases of early life. The rôle which they play is very great, and they should as a class be one of the principal features in the curriculum of the pediatric department, for they belong to it.

The much greater frequency of the diseases of the mouth and of the gastroenteric tract in early life makes a much more extended knowledge of these diseases and special precision in the nomenclature which covers them necessary for those whose province it is to practice principally among children and to teach pediatrics.

This subject of nomenclature is of a good deal more importance than is usually recognized, and the study of pediatrics would be much more simple if such a classification were in vogue in all the universities, even if it were only temporary, as it might be used until some better one could be obtained.

What is especially important is to classify these diseases under some one reasonable nomenclature, so that physicians in the different parts of the world can know in writing on and investigating the diseases of the mouth or of the gastroenteric tract what each one is talking about, and not be at a loss to know if some one else is investigating the same disease under a different name, or, as is especially noticeable in the group of diseases

which is classified under dysentery, calling a number of diseases by one name.

I have thought it worth while to show you the classification which we have temporarily adopted at Harvard in these diseases. This classification of diseases of the mouth in early life is one which was adopted by the pediatric department of Harvard after it had been presented to and endorsed by the American Pediatric Society at its meeting at West Point in 1893, and was prepared by Dr. F. Forchheimer of Cincinnati and myself, who had been appointed by the society in 1892 as a committee to carry out this work.

The infectious diseases of the mouth are so much more frequent in infants than in older individuals that a systematic nomenclature was found to be especially necessary in order that the subject could be taught more systematically and rendered more intelligible to the student. It is not necessary in presenting this nomenclature to explain to you in detail the various facts on which it is founded. The main idea is that there is probably in every disease of the mouth an underlying stomatitis which renders the mucous membrane of the buccal cavity vulnerable to the various organisms which cause its disease.

NOMENCLATURE OF DISEASES OF THE MOUTH.

- Stomatitis
  - Catarrhalis
    - Simplex.
    - Exanthematica
      - Secondary to the exanthemata.
    - Traumatica
      - Mechanical.
      - Thermal.
      - Chemical.
  - Herpetica — Aphthosa.
  - Ulcerosa
    - Scorbutus.
    - Mineral poisons
      - Arsenic.
      - Lead.
      - Mercury.
    - Other diseases.
  - Mycetogenetica
    - Hyphomycetica — Thrush.
    - Pseudo-Membranosa
      - Diphtheria.
      - Tuberculosis.
      - Syphilis and like diseases.
    - Gangrenosa — Noma.

The following nomenclature of the diseases of the gastroenteric tract in infancy shows the classification which is now used in the department of pediatrics at Harvard, and is the one which was endorsed by the American Pediatric Society at its meeting in Washington in 1891, when it was presented by a committee appointed by the society to simplify the unnecessary, complicated and irrational names which up to that time had been in vogue throughout the world. This committee consisted of Dr. Emmett Holt of New York and myself. This nomenclature is merely intended to fill temporarily a much-needed demand until a more precise and rational nomenclature can be drawn up on a purely etiologic basis.

At present in the Harvard Medical School pediatrics is taught every day in the week during the entire medical year. Early in the beginning of the course, during the first month or six weeks, I personally give some elementary lectures to the whole class on three broad subjects:

1. On the elementary knowledge required to appreciate scarlet fever, measles, varicella and diphtheria. As soon as this elementary instruction has been concluded the students are sent in sections to the South Department of the Boston City Hospital, where one of my instructors shows them cases of scarlet fever, measles, diphtheria or any other contagious diseases which happen to be in the hospital. This South Department of the City Hospital is a separate hospital in itself, and is one of the best equipped and finest in the world, probably coming second only to the one in Glasgow. The students are here taught the diagnosis and treatment of the diseases, the best methods of disinfection and isolation, intubation and the use of antitoxin. Each student is required to report on two cases which he has seen during the course of this instruction, and this report is submitted to me at the end of the year, and is taken into account in the final examination for the degree.

The close relation between the different diseases which occur in children, both as to the terminal processes caused by these acute infectious diseases, or occurring in connection with these diseases, such as whooping cough and the different forms of pneumonia, is of such great importance to the student to see before entering into practice, that it has been deemed advisable to still further

NOMENCLATURE OF DISEASES OF THE GASTROENTERIC TRACT.

- A. Gastric.
  - Developmental.
    - a Malformations.
    - b Malpositions
  - 2 Functional...
    - a Acute.....
      - 1 Nervous vomiting. — Central-reflex.
      - 2 Cyclic vomiting.
      - 3 Indigestion.
    - b Chronic.... — Indigestion.
    - c Eliminative.
  - 3 Organic...
    - a Non-inflammatory.
      - 1 Mechanical.
      - 2 Ulcers.
      - 3 New growths
    - b Inflammatory.
      - 1 Acute gastritis.
        - a Catarrhal.
        - b Corrosive.
        - c Pseudo-membranous.
      - 2 Chronic gastritis. — Catarrhal.
- B. Enteric.
  - 1 Developmental.
    - a Malformations.
    - b Malpositions
  - 2 Functional...
    - a Acute.....
      - 1 Nervous... — Central-reflex.
      - 2 Indigestion.
        - a Duodenal.
        - b Intestinal.
    - b Chronic....
      - 1 Nervous... — Central-reflex.
      - 2 Indigestion.
        - a Duodenal.
        - b Intestinal.
      - 3 Incontinence
      - 4 Constipation — Atonic-spasmodic.
    - c Eliminative.
  - 3 Organic....
    - a Non-inflammatory.
      - 1 Fermental... — Acid-albuminous.
      - 2 Mechanical..
        - Dilatation of colon.
        - Volvulus.
        - Intussusception.
        - Hernia.
        - Fissure.
        - Prolapse.
        - Polypi.
        - Hemorrhoids.
        - Fistulæ.
      - 3 New growths
    - b Inflammat'ry
      - a Proctitis.
      - b Appendicitis
        - a Acute.
        - b Chronic.
      - c Ileocolitis.
        - a Acute.
        - b Chronic.
- C. Animal parasites.

broaden this course, and we are now contemplating giving advanced teaching in these diseases in the last year of the school course.

2. In like manner I give an elementary course on the gastroenteric diseases of infancy to the whole class just before the clinical teaching of these diseases is given in the wards and out-patient clinics.

3. I have also found that it is necessary to give some preliminary lectures on human breast feeding, and on the general principles of our American percentage feeding, before the practical teaching, both in the classes and in the wards, can be carried out with success.

What I especially wish to explain in regard to what I have just said is, that certain preliminary didactic lectures should be given on the subjects just mentioned before the student is given his bedside instruction.

After these three preliminary divisions have been briefly mapped out for the students, certain didactic lectures are given by myself twice a week to the whole class, such diseases being especially spoken of which it so happens in an especial year can not be obtained for the clinical

exercises. When examples of these diseases can be obtained the didactic teaching is replaced by the clinical, and what I have found to be of especial value in this latter method of instruction is not only the close intercourse with the individual student which it allows, but also the mutual stimulation to criticise and discuss the various features of the case with each other which it engenders, as these exercises are made entirely informal. Certain subjects are also taught from the text-book, but this part of the teaching is very limited, and is soon supplemented by what we are in the habit of calling case teaching. This is usually given at the end of the year, just before the examination, and is a discussion of picked cases, the history of which has been given to the student (printed) in the previous week, so that he may have the opportunity of studying the case before it is discussed. The teaching of the whole class, both didactic, clinical, by recitations and by case teaching, plays, however, but a small part of what we consider the best methods of instruction in the department of pediatrics. The greater part of the teaching is given in sections of five or six, in the wards of our infants' and children's hospitals, and it is this class of teaching which we think most of at Harvard. The other methods are simply preparatory, and in order to systematize the student's knowledge of the subject and to crystallize his ideas.

Recognizing what I have told you concerning the importance of anatomy, physiology and pathology in the study and teaching of pediatrics, they should be made a part of the curriculum of all advanced medical teaching, as should a course on laboratory therapeutics. We expect that the anatomic department will give an especial course on the anatomy of children, and the physiologic department has intimated that it will also give especial physiologic instruction in connection with infancy and children, preparatory to our later clinical teaching in the hospitals. In this way only can pediatrics be thoroughly and intelligently studied, and the young physician can not acquire a proper knowledge of infants and of children if his anatomic knowledge comprises only the anatomy of a later period, as is usually the case in most of our medical schools in the past. There is just as much reason in preparing students for the clinical study of infancy and childhood, by especial anatomic and physiologic teaching, as that such preparation should be made for the clinical medicine of adults.

Bearing all these facts in mind, we are deducing from them a system for teaching in the department at Harvard certain practical measures which we expect to carry out and perfect when the buildings and hospitals of the new medical school are erected. In the first place, we expect to teach the diseases of the first two years of life, in a hospital built and arranged for this age, and to have another hospital arranged for the needs of sick children between 2 and 12 years of age, with especial arrangements for the teaching of the different diseases as they occur at that period. We have also decided that such diseases as scarlet fever, measles, diphtheria, varicella and pertussis are so essentially connected with the early periods of life that they should be taught in the department of pediatrics, and with this end in view an assistant professor who has control of the fine department for contagious diseases in connection with the Boston City Hospital has been placed in the department of pediatrics.

There is another question that is of importance in looking on the study of pediatrics in this broad way, namely, that a thorough knowledge of the subject is of inestimable value to the practitioner of medicine, whether he be the so-called general practitioner, or whether he devotes himself entirely to children. The treatment of diseases in children is not necessarily a specialty. The physician can only decide how much of this clinical medicine he is able to practice or to teach well, by gauging his own capabilities to grasp the especial subject and his opportunities of so doing. There is surely enough to be learned and enough to be done in the clinical medicine of infancy and children to more than fill the time and tax the brain of the average practitioner. It is needless to say how important a great deal of knowledge of infants and children is to the general practitioner of medicine. When we consider how it is usually through the younger members of the household that the young physician enters into his practice, it is very evident that much more study in the practice of pediatrics is needed by the average practitioner, especially when we see how numerous are the mistakes and how bad the results of his treatment; in fact, it not infrequently occurs that the child is found to be suffering, not from the terminal processes of the disease which it has just been treated for, but from the inappropriate treatment to which it has been subjected.

In conclusion, let me express the hope that I have not dwelt at too great length on a subject which has only recently gained recognition as one worthy to be raised and placed on a level with other great departments of medicine. It is my belief that as time goes on the leading medical schools of this country will adopt a policy similar to that which I have outlined as prevails in Harvard University, and I shall merely say, in parting, Godspeed to the development and teaching of pediatrics in your great city.

THE TREND OF MODERN SURGERY.*

JAMES E. MOORE, M.D.
MINNEAPOLIS.

Westerners as a class have the reputation of thinking well of themselves and of being rather boastful of their achievements. It is very evident that others would not think well of us if we did not think well of ourselves, and it is now conceded by those whose good opinion we prize most highly that western surgeons have accomplished much of which they may be proud and even a little boastful. Most of those present have been obliged to do surgery under a serious handicap. We have had no marble walled operating rooms and no rich endowments. We have been obliged to build our hospitals as we went along and our endowments are yet to come. In short, we have had opportunities only as we have made them. It is this ability to overcome obstacles and to make opportunities that characterizes the western man. Western surgeons are proud of the fact that, notwithstanding the many disadvantages they have labored under, they are not now accused of making up the rear guard in the surgical procession.

At the organization of the American Surgical Association in 1882 one of the leading surgeons of the day said, "In my opinion surgery has nearly reached its limits. I do not see how it can advance much beyond its present height of perfection," yet in twenty years that have elapsed since that statement was made surgery has made more advancement than in all time before. The profession has

* President's Address before the twelfth annual meeting of the Western Surgical and Gynecological Association, held at St. Joseph, Mo., December 29 and 30, 1902.

been swept by such a wave of optimism, aggressiveness and surgical furor that it behooves us to scan closely our present trend. What is there in the present tendencies of surgery that makes for good and what for ill? That the general trend is toward better things all will agree, but that there are some dangerous tendencies all must admit. It is well for us occasionally to see ourselves as others see us. To this end I wish to quote briefly from an editorial which appeared in the *Minneapolis Daily Tribune* on the occasion of Dr. Lorenz's too much advertised visit to Chicago.

Reaction from the Knife.—The brilliant operations in bloodless surgery which the Austrian, Dr. Lorenz, is conducting in Chicago and elsewhere, call attention to a distinct reaction from lavish use of the surgeon's knife which is appearing in the higher levels of the profession. It is time for a counter revolution in this direction. Tremendous impetus has been given to the use of the knife in surgery by the two discoveries of anesthesia and antisepsis. Surgeons began to carve more freely when they found a way to do it without causing torture to their victim. But their power to explore the human interior was limited by the perverse habit of dying after the operation. In many cases this was due to the secondary cause of blood poisoning, which was largely removed by the later discoveries of antiseptic surgery. Then came a perfect riot of cutting and slashing, attended undoubtedly with great benefit to the human race. It would not become laymen to say that this has gone too far, because intelligent surgery always weighs carefully the chances of death and recovery, with or without an operation. If it was a great gain for humanity to learn how to use the knife with less danger to the patient, it will be a greater gain to learn how to dispense with the knife in many cases.

While we can not endorse this editorial, there is some truth in it. Our only defense is that while we do go to extremes at times there is no greater tendency in that direction among surgeons than among any other class of men. Even newspaper men by trying cases "out of court" succeed in hanging some innocent men and assisting some guilty men to escape. Surgeons are accused of being over aggressive, but the aggressor is far less dangerous than the obstructionist, and he has the saving grace of learning something while the obstructionist never learns. Even extremists have their uses. We do not look to extremists for the best in anything, yet if it were not for them we could not know our limitations. The editor just quoted, like many medical men, has a wrong conception of conservatism. He seems to think that conservatism consists in not using the knife, when we all know that the knife in judicious hands is the greatest conservative agent at our command. True conservatism consists in doing that which will the most surely prolong human life and prevent suffering. Surgeons are more truly conservative now than ever before because they save more lives and prevent more suffering than their predecessors ever did. Surgeons should not be held responsible for the work of the would-be surgeons found in every community where surgery is being done. Their ranks are filled up with young men not yet out of their medical swaddling clothes, and with older men without experience and proper training who are seeking for a royal route to fame and fortune. Their work is at times appalling and none deplore it more than the surgeons. The time will come—and it can come none too soon for the welfare of suffering humanity and the honor of surgery—when the law will require of a man that he shall have had hospital experience and shall have shown special qualifications as a surgeon before he will be allowed to perform operations involving life and death. A diploma from the best of medical colleges is no criterion, for not all physicians, not even all good physicians, can become surgeons.

Medical colleges are trying to turn out better educated medical men by raising their standard of entrance and lengthening their college term. There is no question but that the tendency is toward better education, but there is great room for improvement yet. The lengthening of the college term from two to four years unfortunately does not mean that the student spends twice as much time in studying the diagnosis and treatment of disease. So much of his time is taken up by laboratory work that he has very little more time to study medicine than he had when the course extended over but two years. We must not forget that we are trying to make doctors out of these young men and not embryologists and bacteriologists. We can not all be bacteriologists any more than we can all be surgeons. Much of our laboratory teaching at the present time is theoretical and of very little practical value. There is no crying need of half-baked medical men; why not extend the course to six years and limit the laboratory work to the first two? We certainly should do this or make the laboratory course a requirement for entrance to the medical course, leaving a full four years for the study of medicine. Our institutions have been spending so much money building and equipping laboratories that they have little or none left for hospitals and clinics.

We make this criticism of medical education in order that we may more consistently criticise the teaching of surgery. Our didactic teaching has improved and is still improving very materially. The didactic lecture, given alike to freshmen and seniors, is fortunately a thing of the past. It has given place to graded instruction and recitation. Our clinical teaching of surgery, however, is very faulty. The average surgical clinic has been very aptly likened to a continuous vaudeville performance. There is too much of major and too little of minor surgery. It is of infinitely greater value to a student to see a finger amputated or a fracture treated than it is for him to see an abdominal operation. The students see so much major surgery and so many brilliant results that they naturally think it is easy and that they can begin doing that kind of surgery as soon as they get out of college. This is certainly a bad tendency, but one that is easier to find fault with than to remedy. The remedy is for the medical colleges to furnish the clinician with abundance of material and with the same facilities for graded instruction that are furnished to the laboratory teachers, and to so compensate him financially that his only hope of reward is not through the advertisement he may get from his clinic. Eminent jurists and theologians are not obliged to charge their time spent in teaching to the advertising account. They have too much good sense to allow themselves to be placed in any such position. The position of the average clinical teacher is all wrong, and the humiliating part of it is that it is all his own fault. We as surgeons can fully appreciate the value of laboratory work, but as teachers we should insist that it shall supplement and not supplant the teaching of medicine and surgery. One of the great advances surgeons have made is the supplementing of clinical diagnosis with laboratory diagnosis.

The tendency now is to give the patient a more thorough and careful examination than we formerly did, making use of many scientific mechanical devices to aid us. Each year some new devices are added to our

armamentarium and old ones are being improved on. At the present time no one who is imbued with the prevalent professional spirit thinks of listening to a patient's tale of woe and then writing a shotgun prescription. On the contrary, a careful and systematic physical examination is made and the patient gets fewer drugs than ever before. This method of examination is the outcome of specialism.

The one thing that has had more to do with the advancement of medicine and surgery than any other is specialism. It stands to reason that one who devotes his whole time to one branch of the profession can do better work than he otherwise could. A specialist who has not graduated only yesterday, but who has developed from a general practitioner is certainly in a position to do better for the community and for himself than if he were to try to cover all branches throughout his professional career. One of the bad tendencies of the day is for young men to go directly from college into special work before they know to what line of work they are best adapted and before their knowledge is broad enough for good general work and while it is utterly inadequate for special work. When so many new things were added to medicine specialism became a necessity, and it in turn has developed the science of medicine to a degree that could not otherwise have been attained. As soon as men began to devote their whole attention to some one branch of the profession they became more expert in old methods and discovered many new ones. Twenty-five years ago the oculist and aurist was practically the only specialist known. Then came the gynecologist, but as long as he confined himself to the local application of nitrate of silver, to glycerin and tannin tampons and pessaries, he made very little progress. Very soon, however, he began to do plastic surgery, which lead to pelvic surgery. From pelvic surgery he soon passed on up to the diaphragm and out through the abdominal wall to the breasts, when he began to lose his identity and to become a general surgeon. The consequence is that there are fewer gynecologists now than there were ten years ago. The gynecologist developed the science of abdominal surgery, for which we owe him an everlasting debt of gratitude. At the present time the bulk of most general surgeon's work is abdominal surgery. It is absurd to maintain that the surgeon who can do good work in the upper part of the abdomen can not do equally good work in the lower part, and vice versa.

Fifteen years ago there were very few specialists in general surgery. There were none in the West, and, in fact, it was not believed possible for a man to get enough surgery to keep him busy. About this time, however, a few pioneers began to realize the great possibilities of surgery as a specialty, and the consequence is that to-day we have specialists in surgery in every city of consequence throughout the land, and the more surgeons there are the more surgery there is for them to do. New fields have been entered each year and the end it not yet.

Hospitals are being established without number, and it will be interesting to note the results. Many of them being poorly equipped and poorly manned will doubtless close, but others will remain a blessing to their communities and to the profession. The good country hospitals will be helpful to the metropolitan hospitals because they will educate the country people to the hospital idea and teach them the possibilities of surgery. We will find that the more hospitals there are the more surgical cases there will be to fill them. The modern hospital, with its trained nurses, is a very essential part of modern surgery, and the rule now quite generally adopted by surgeons that every patient requiring an operation must go to a hospital when it is possible, has much to do with advancing surgery. The people in the cities have already learned that a hospital is not a charnal house, but a harbor of safety. We find very little difficulty now in persuading our patrons to go from the finest homes to the hospital. The country people already know something of this, and through the country hospitals will soon learn more. We of the larger cities need not fear the competition of the country hospital, because much that will be done there would otherwise be undone.

A few years ago when our present technic was being developed many of the papers read were on that topic, but now we are so content with our methods that the technical paper is the exception. There is even a little tendency to criticise one who writes a paper on technic as though this subject were settled for all time, but this is wrong, for great as have been our improvements we have not yet attained to perfection. It has been suggested by a recent writer that a uniform standard of technic be established, but it is questionable whether this can ever be brought about, and if it could be done it is not desirable, for technic is the work of human hands and can never be perfect. An established standard would imply perfection which would prevent progress. The early history of antiseptic surgery was an illustration of our tendency to go to extremes. Our very elaborate technic at that time made us seem ridiculous in the eyes of unbelievers and the laity. There is a very wholesome trend now toward simplicity in technic. The best surgeons are those who have the least paraphernalia and who make the least fuss about an operation.

Strong chemicals are rapidly disappearing from our operating rooms and are giving way to soap, water, brush, boiled instruments and rubber gloves. The late Lawson Tait builded better than he knew, for when he thought he was denouncing antiseptic surgery he was really teaching us aseptic surgery. We have even learned that an operation can be conducted more satisfactorily and comfortably without flooding everything with water. There should be but one rule in aseptic surgery, viz., absolute surgical cleanliness, brought about in the simplest manner possible.

The tendency in the West is to abandon all unabsorbable buried sutures. One who becomes accustomed to catgut uses it more and more, until he finally uses it for everything but the intestines and the integment. One accustomed to it finds no objection to it.

One of the most hopeful signs of the times is the great interest surgeons take in each other's work. A spirit of kindly criticism prevails that is helpful to us all. So much good surgery is being done everywhere that it is quite the proper thing now for surgeons to visit each other and make comparisons which are bound to prove beneficial. We have always traveled East for surgical light, but at the present time there is a very respectable and rapidly increasing return current toward the West.

In conclusion: Let us continue to work so that it can not be said of us twenty years hence that we did good work for a few years and then folded our hands and said we have attained to such a height of perfection that farther advance is impossible. Let us continue to work, still admitting that there is room for advancement, not being content with our laurels until we shall have at-

tained the millennium when there will be no disease and no suffering.

Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.

Original Articles.

A MODIFICATION OF PANAS' OPERATION FOR PTOSIS.

FRANK ALLPORT, M.D.
Professor of Ophthalmology, Chicago Policlinic; Ophthalmologist and Otologist to St. Luke's and Wesley Hospitals, etc.
CHICAGO.

Panas' operation for ptosis probably yields better results, on the whole, than any other operation, and yet its various steps are not always clearly understood by

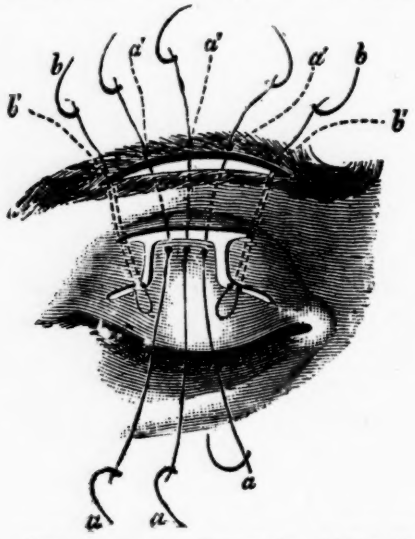

Fig. 1.—Panas' operation for ptosis. (After Panas.)

operators, and it possesses some glaring defects that have served to render it rather unpopular. It is for the purpose of clearing up these misunderstandings and

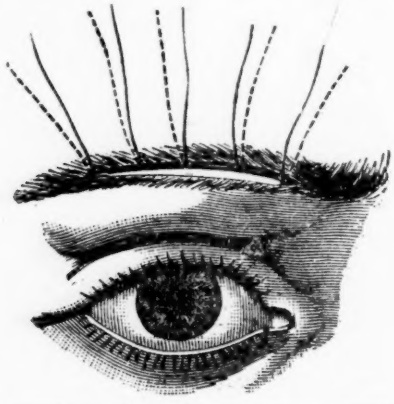

Fig. 2.—Appearance after the operation is completed. (After Panas.)

remedying the defects that I have ventured to offer this communication.

I will first reproduce the drawings usually given to clarify the written description of Panas' operation, and it will be seen that they do not entirely clear up some of the points in the ordinary description.

I think that the addition of a plain schematic drawing would better demonstrate the different steps in the operation, and for this purpose at my clinics I draw a plan like Figure 3.

The line indicated by 1 represents the first incision, which should be in the eyebrow and extend to the bone. The line indicated by 2 represents the second incision, which should be just below the eyebrow, and should extend also to the bone. The bridge of tissue between these two incisions should not be more than 5 or 6 mm. in width. The line marked 7 represents the palpebral margin of the upper lid. The line marked 3 represents a short incision in the lid at about the upper margin of the tarsal cartilage, and should be from 8 to 10 mm. long, and should pass completely through the skin. The line marked 4 represents another similar incision in the opposite angle of the lid. The lines marked 5 and 6 represent two incisions passed completely through the skin and uniting 3 and 4 with 2. While incisions 3, 4, 5 and 6 are being made, the horn spatula should be placed underneath the lid, both to facilitate the making of the incisions and to avoid accidents to the underlying eyeball. The tissue between incisions 5 and 6 should be about 15 mm. in width.

Figure 1, as given by Panas, shows all the lines, etc.,

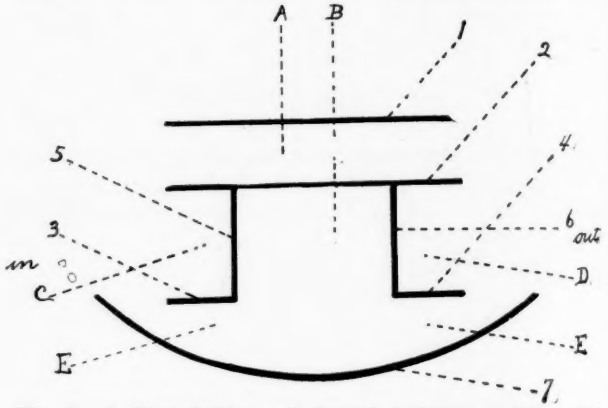

Fig. 3.—1. First incision. 2. Second incision. 3. Third incision. 4. Fourth incision. 5. Fifth incision. 6. Sixth incision. 7. Edge of upper lid. A. Bridge flap. B. Tongue flap. C. Nasal flap. D. Temporal flap. E. Palpebral flap (nasal side). E. Palpebral flap (temporal side).

to be beautifully curved in outline, but in practical work these curves are not feasible, and I believe straighter incisions can be much more accurately made, and will not detract from the efficiency of the operation.

The original drawing of Panas (Fig. 1) is misleading, as it shows the two threads in the five needle holes in the superior portion of the eyebrow incision, both coming out of the same needle hole, whereas they should be shown as coming out of separate needle holes, side by side and close together, as shown in Figure 4, which I would suggest as in every way a plainer drawing than Figure 1.

The description as given by Panas is also not explicit concerning the sutures 4 and 5, which are placed to prevent a tendency to ectropion induced by the traction effect of sutures 1, 2 and 3. These sutures should include the tissues of the lid except the skin and tarsal cartilage, and should be inserted in the spaces between the skin flaps. One of the needles of a double-needled thread should be inserted directly through the lid from within outwards, just above the upper edge of the tarsal cartilage, and pulled through, after which the other needle should be inserted through the tissues, also from within outwards, and brought out close to the first point of entrance of this suture, leaving the loop of the suture on the conjunctival surface of the lid. The lid should

be held well away from the eyeball either with the fingers or forceps during the entire placing of these sutures, so that the operator may look under the lid and see what is transpiring, and so that the needle may not injure the eyeball. The sutures should then be passed up under the bridge flap, and through the superior margin of the brow incision and firmly tied.

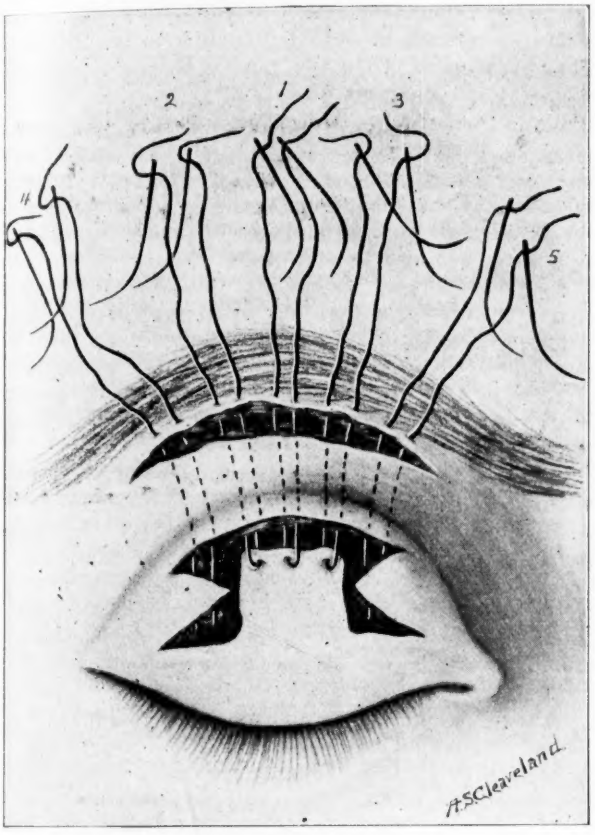

Fig. 4.—1. First suture. 2. Second suture. 3. Third suture. 4. Fourth suture. 5. Fifth suture.

One great objection to the operation is the fact of the non-adherence between the flap marked B (Fig 3), which I will call the tongue flap, and the flap marked A (Fig. 3), which I will call the bridge flap. The upper surface of the tongue flap is unbroken skin, that of the

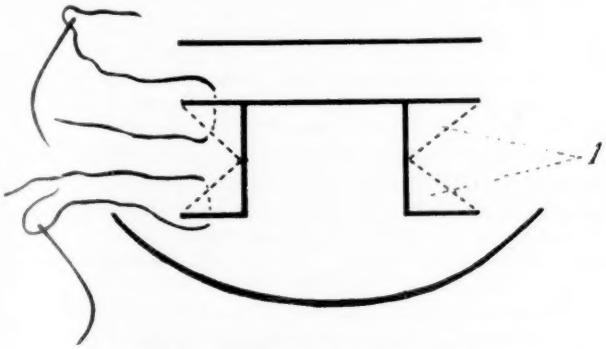

Fig. 5.—1. Corners cut from flap.

under surface of the bridge flap is connective tissue, fat, etc., and the two do not heal together, which leaves a pocket or cul-de-sac between the two for the permanent accumulation of various forms of debris, which is both unsightly and unhealthy, as well as being a distinct defect in the operation. This objection I remedy by thoroughly scarifying the skin surface of the tongue flap by criss-cross incisions, and then removing most of the dermal epithelium by delicate forceps and scissors. This procedure is accomplished before the tongue flap is dissected from the underlying tissue, as the flap is then firm, and can be handled easier than after it is lifted. The sutures are then placed and the tongue flap drawn up under the bridge flap and tied, and in a few days perfect adhesion will take place. Another objection to the operation is the thick, lumpy appearance of the bridge flap, which never entirely disappears. This objection I minimize by making the bridge flap as narrow as possible, never more than 5 or 6 mm. in width, and also making it as thin as possible by stripping it of all possible tissue beneath the true skin.

The last objection to the operation is the two pieces of skin at the angles of the lids marked C and D in Figure 3, which pucker up and look permanently bulky

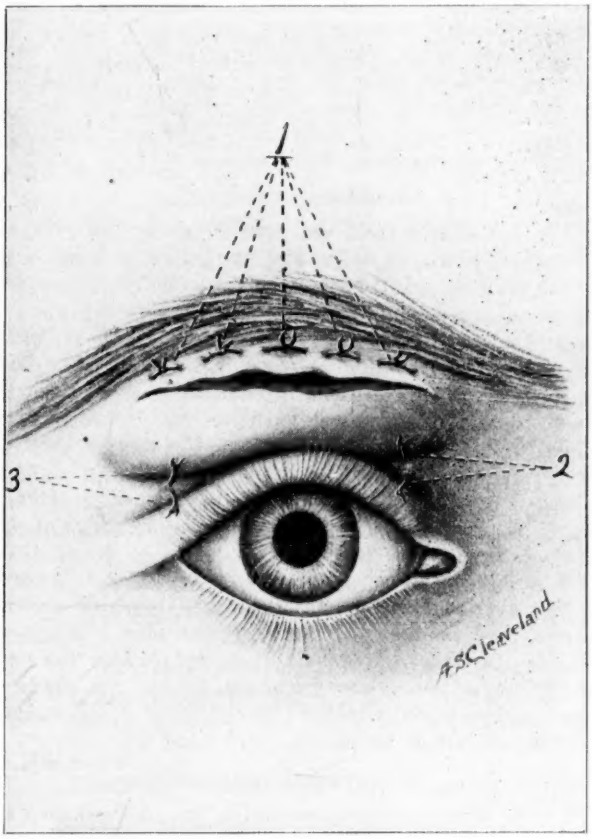

Fig. 6.—1. Sutures 1, 2, 3, 4, 5, after being tied. 2 and 3. Sutures in flaps C and D after being tied.

and unsightly. This I remedy by cutting off the corners as seen in the dotted lines of Figure 5, and then thinning the under sides of flaps C and D (Fig. 3) by removing all possible tissue except the true skin. Flaps C and D (Fig. 3) are then sutured to flaps E and E (Fig. 3) and flap A (the bridge flap) by four sutures, which makes the entire field of operation present a smooth and finished appearance and adds much to the cosmetic effects of the operation, as shown in the completed operation of Figure 6.

I have performed the operation as thus outlined a number of times, and have not failed to obtain satisfactory results.

Crystallized Wisdom on Epidemics.—In these days there are no excuses for epidemics of filth diseases; there are only explanations of them.—"N. Y. Times."

THE EXTERNAL PREPARATIONS AND THEIR THERAPY.

CARL S. N. HALLBERG, PH.G.

Professor of Pharmacy in the School of Pharmacy, University of Illinois; Member Committee of Revision U. S. Pharmacopeia.

CHICAGO.

While the history of the preparations embraced in the broad generalization of external preparations is of the most ancient origin, yet their evolution and differentiation along therapeutic lines is largely a matter of recent development.

Up to a comparatively recent period the fats employed for vehicles of the oleagenous preparations were selected with sole reference to their pharmaceutic properties, that is, to afford preparations possessing the most desirable physical characteristics: proper consistence, ready fusibility, etc. The earlier materia medica was especially rich in oils and fats of animal origin, the fat of nearly every creature being vaunted as having especial virtues, such notions still surviving among many peoples, as, for example, bear-grease to promote the growth of the hair; goose-grease to loosen and break up a cold; rattle-snake oil as an application for rheumatism, and many similar domestic remedies.

OINTMENT VEHICLES.

The introduction of the petroleum fats or soft paraffins, in 1870—cosmolin and vaselin—was a great advance over the rancid and otherwise often decomposed mixtures of animal and vegetable fats, mostly used before this time, and the substitution of these practically inodorous and unchangeable soft paraffins for the latter became quite general. The immiscibility with water and watery liquids of the soft paraffins was the only drawback to their more extended use, until about 1882 the purified wool-fat appeared under the name of lanolin. The peculiar property of this cholesterin, even after being hydrated, to take up its own weight of water at once attracted attention, and when its power to penetrate the skin was subsequently discovered it began, though slowly, to be recognized as a valuable medium by which systemic effects may be obtained through the skin. While the fat from wool was used by the ancients under the name of "Œsypus," to Oscar Liebreich is due the credit of presenting a pure hydrated form of it under the name of lanolin, official as adeps lanæ hydrosus, U. S.

THERAPEUTIC GROUPING.

The at first more or less empiric use of these two fats —the soft paraffin and lanolin—of exactly opposite qualities as regards their water miscibility and property to penetrate the skin, led eventually to the grouping of the ointments and similar preparations from a therapeutic standpoint, according to the vehicle employed, substantially as follows:

1. *Epidermatic:* **Non-penetrative, or non-absorptive. Protective, antiseptic. Vehicle: Soft paraffin, vaselin or petrolatum, U. S.**

2. *Endermatic:* **Semi-penetrative or semi-absorptive. Emollient, nutritive, astringent, etc. Vehicle: Animal or vegetable fats, oils and waxes. Lard, suet, oils of almond, olive, etc.**

3. *Diadermatic:* **Penetrative or absorptive. Systemic or constitutional. Vehicle: Lanolin or hydrated wool-fat.**

While this classification is a generalization, its approximate correctness is apparent from the fact that a vehicle consisting of equal parts of petrolatum and lanolin, the respective types of the two extreme groups, has the general properties of the intermediate endermatic group. Since this vehicle does not become rancid or react with chemicals, as do the animal or vegetable fats and oils, it serves excellently for endermatic uses.

SUPPOSITORIES.

In no class of preparations has the failure to consider the general therapeusis been so apparent as in the suppositories. Since their first introduction into the U. S. Pharmacopeia in 1870 the vehicle has been uniformly cacao-fat or theobroma oil.

While three different forms of suppositories are recognized no distinction is made as to the vehicle employed, although the necessity for such selection is generally conceded. For rectal suppositories fats undoubtedly are the best vehicle, not only because of the alkalinity of the secretions, but also because more or less penetrative or absorptive effects are desired. Cacao-fat serves this purpose probably better than any other fat. While soap is sometimes used, its effects are simply those of an irritant or solvent, as in the official glycerin suppositories. Neither is gelatin a proper vehicle for rectal suppositories, except when used instead of nutritive enemata, where other considerations supervene.

On the other hand, the secretions of the urethra and vagina are normally acid, and fats are therefore not indicated as the proper vehicle for urethral and vaginal suppositories, but water-soluble substances should be employed. Glycero-gelatin answers the purpose probably better than most of the other substances employed, the only objection being that in melting it exudes and may mat the pubic hairs. By using 50 per cent. anhydrous glycero-gelatin mass, a soft, readily-soluble "bougie" is obtained in which tannin and similar agents may be presented without difficulty.

The late Dr. Hay of Chicago employed a vaginal suppository of elm powder which had the advantage of ready preparation in that the suppository could be easily formed into any shape desired with the fingers.

Glycero-Massa Ulmi (Elm Suppository-Mass.)—**Powdered elm bark, 10; water, 6; glycerin, 6 c.c. In the water and glycerin previously mixed dissolve the required amount of the medicinal agent, add the solution to the elm powder at once, and quickly mix and form a mass, by working the mixture in a mortar. A soft, cohesive and plastic mass results which may be rolled out, divided into the required number of parts (for the above quantity of 6) and made globular by forming with the spatula and the fingers. This operation should be done quickly, since the mass hardens in about ten minutes and can not then be readily formed. Any form can easily be made in this manner without losing its shape. In about twenty-four hours the suppositories become hard and elastic.**

In a suppository the medicinal agent should be most thoroughly distributed with the vehicle, as in all similar preparations, and it is worst kind of slip-shod pharmacy to use the so-called "hollow" suppositories.

CERATES.

The cerates are mixtures of fats and waxes, having a higher melting point than ointments, their firmer consistence requiring them usually to be spread on cloth and applied as dressing. They are, therefore, in the epidermatic group and comprise protective, cooling, emollient and vesicating effects. The cantharidal cerate is the most important, and when spread on adhesive plaster in such thickness as to obliterate the yellow color of the plaster cloth, when viewed through the light, it is the most effective cantharidal vesicant to be had.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. A. W. Baer, A. B. Lyons and W. J. Robinson.

PLASTERS.

This most ancient form of medication has largely fallen into disrepute during recent years, owing partly to their ineligibility and uncertainty of action, and partly to the advent of more efficacious and more quickly responsive methods of treatment. The advent of the rubber plasters has also caused the lay public, which believes in "anything that will stick," to appropriate the plasters as its own sovereign remedy for all kinds of aches and pains.

Nevertheless, the plasters serve a useful purpose owing to the great range of their application, which may be summarized in the following groups:

1. *Epidermatic:* **Supportive, protective, antiseptic, counter-irritant, vesicant. Vehicle: Rubber or any suitable adhesive.**
2. *Endermatic:* **Anodyne, astringent, alterative, resolvent, sedative, stimulant. Vehicle: Oleates or lead plaster, sometimes with resins or gum-resins.**
3. *Diadermatic:* **For constitutional or systemic effects. Vehicle: Lanolin or plaster-mull.**

The vehicle for the commercial rubber plasters is chiefly India-rubber, or caoutchouc, with sufficient orris powder and sometimes gum-resins, to give it the proper consistence and retain its adhesive properties. For epidermatic purposes this serves admirably as a convenient and fairly stable adhesive, but since it lacks penetrative properties in any considerable degree, it should not be used for endermatic effects, such as are sought from drugs like belladonna. The suggestion to increase the efficacy of rubber belladonna plaster by the addition of boric acid would seem also to support the view that such anhydrophile mixtures do not penetrate into the skin, as has also been clinically demonstrated.

For endermatic effects the oleates, as represented by the well-known lead plaster, are the best vehicle, since they penetrate into but not through the skin, and thus have the desired effects without producing any systemic or constitutional results. The objection to the old-style plasters with a lead-plaster vehicle, that they are impaired by age, become brittle and lose adhesiveness, has been met by improved methods of manufacture affording an adhesive plaster which retains its flexibility and through the admixture of a little rubber adheres without being artificially warmed.

For diadermatic or systemic effects the vehicle for plasters should be animal fat, such as lard or suet with waxes, or preferably mixtures of these with lanolin, substantially like the plaster-mulls of Unna. The official mercury plasters, at present made with lead plaster and gum resins, should be prepared with this lanolin vehicle.

OLEATES.

The official oleates are liquid or semi-solid mixtures of the respective oleates in oleic acid in excess which renders them often ineligible. The true oleates, or so-called "dry oleates," are preferable, but these should be diluted with a proper vehicle before use.

As indicated above, the oleates do not penetrate through the skin, which becomes self-evident when the constant use of soap (sodium oleate) is considered. While there is plenty of evidence that the natural oleates, the oils of olive and almond, also the oleopalmitates and stearates, lard, butter, etc., in which the respective acids are linked with the radical glyceryl, penetrate through the skin and are absorbed in the system, the artificial compounds of these acids with the metals and alkali bases, known respectively also as insoluble and soluble soaps, are not absorbed through external use. If it were otherwise, what an inducement for the people in "the farther Mediterranean" to consume at least some portion of their daily rations of olive oil in the form of soap.

LINIMENTS.

The value of liniments depends on the degree they penetrate into and through the skin, only one official liniment being protective, that of lime, the well-known Carron oil, so called from the factory town in England where the mixture of linseed oil and lime water originated as an application to burns. While the effects resultant from such liniments as consist of oils or soap solutions are supposed to be largely influenced by the mechanical rubbing or massage in their application, solutions of medicinal agents, such as belladonna, camphor, etc., in alcohol or other volatile liquids, are no doubt more effective when they are applied by means of an occlusive dressing as shown by the extended researches of Dr. Thos. F. Reilly,[1] presented to this association in 1900.

Several modifications have come into recent use: the saponimenta or liquid medicated soaps, which may be prepared extemporaneously from the official soap liniment or from the semi-solid form, linimentum saponatum camphoratum of the National Formulary or solid opodeldoc.

COLLODIONS.

The collodions, owing to the impervious film of pyroxylin or colloxylin which they leave on evaporation of the volatile solvent ether-alcohol, suggest a wider employment, and as being well adapted for applications on small areas, when lasting effects are desired of tannin, iodin, iodoform and similar derivatives. The official list may well be extended to include those of the National Formulary.

The linimenta exsiccantia, or the so-called drying liniments, have somewhat similar uses, except that they do not form so impervious a coating as do the collodions, the vehicle consisting of mucilages of starch, dextrin, tragacanth or albumin. The following is a type, which may be medicated as desired with zinc oxid, chrysarobin, iodoform, ammoniated mercury, ichthyol, salicylic acid, etc.:

VERNICIUM ICHTHYOLI ALBUMINATUM, UNNA.

℞.	Ichthyol sulph. ammon.	3v	20
	Starch, powder	3v	20
	Distilled water	3xv	60
Mix with:			
	Liquid egg-albumin, recent	m. xii	75

MODERN DERMATOLOGIC PREPARATIONS.

Pastæ (Pastes—Dermatologic—Lassar, Unna, etc.)—These are mixtures of starch, dextrin, zinc oxid, sulphur or calcium carbonate, made into a paste with glycerin, soap or fat, such as petrolatum or lard, medicated with antiseptic or astringent agents. The following are important examples:

PASTA ZINCI, LASSAR (ZINC-SALICYL).

℞.	Acid salicylic	gr. xxx	2
	Zinc oxid, starch, each	3vi	24
	Petrolatum, white	3xiiss	50

PASTA RESORCINI (MITIS), LASSAR.

℞.	Resorcin	3iiss	10
	Zinc oxid, starch, each	3vi	25
	Petrolatum, liquid	3x	40

PASTA NAPHTHOLI, LASSAR.

℞.	Naphthol	3iiss	10
	Sulfur, pp	3xiiss	50
	Petrolatum		
	Soft soap, āā	3v	20

1. THE JOURNAL A. M. A., Jan. 26, 1901, p. 250.

PASTA ZINCI MOLLIS, UNNA.

℞.	Zinc oxid., calc. carb. pp., each	3vi	24
Mix these powders and incorporate gradually:			
	Lime liniment	3xiiss	50

PASTA ICHTHYOLI, UNNA.

℞.	Ichthyol, sulf. ammon.	3iiss	10
	Distilled water, glycerin, dextrin, each ..	℥i	30

PASTA ZINCI SULFURATA, UNNA.

℞.	Zinc oxid	℥ss	15
	Sulfur, pp.	3iiss	10
	Acid silicic (kaolin)	gr. lxxx	5
	Benzoated lard	3xviiss	70

PASTA DEXTRINATA.

℞.	Dextrin	3xxv	100
	Glycerin, distilled water, each	3xxv	100
Dissolve by heat, add water to make 300 gm. ℥x.			

This is a general vehicle for many medicated pastes used in dermatology.

PASTA KAOLINI. GLYCEROPLASMA KAOLINI.

℞.	Kaolin, elutriated and dried	3xiiss	50
	Glycerite boroglycerin	3iiss	10
	Methyl salicylate, thymol, each	gr. i	5
	Glycerin, to make	3xxv	100
Or sufficient to make a semisolid paste by thorough levigation.			

Stili (Stili Dilubiles, Unna. Pencils.)—Pencils for the direct application to the skin of medicinal agents—antiseptics, astringents, anesthetics, etc. These agents are dissolved or mixed with a paste consisting of mucilaginous or saccharin vehicles, starch, dextrin, tragacanth, sugar, etc., rolled out into sticks about 1/5 inch (5 mm.) in diameter and 2 inches (5cm.) in length, dried at ordinary temperature on parchment paper and wrapped in tin-foil.

Gelatinæ Glycerinatæ (Glycerogelatin).—Gelatin mass as a vehicle for suppositories and other external applications is used as follows:

GLYCEROGELATINA ACIDI SALICYLICI, 10 P. C., UNNA.

℞.	Gelatin	3iiss	10
	Glycerin	3xiss	45
	Distilled water	3ix	35
	Acid salicylic	3iiss	10

GLYCEROGELATINA IODOFORMI, 10 P. C., UNNA.

℞.	Gelatin	gr. lxxx	5
	Glycerin	3v	20
	Distilled water	3xvi	65
	Iodoform	3iiss	10

GLYCEROGELATINA ZINCI DURA, UNNA.

℞.	Gelatin	3iiiss	15
	Distilled water	3xiss	45
	Glycerin	3vi	24
To this add gradually the following, levigated:			
	Zinc oxid	3iiss	10
	Glycerin	3iiiss	15

Then mix with it enough water to make 100 gm. The soft form (Glycerogelatina Zinci Mollis) is prepared in the same way by using 10 gm. gelatin.

These glycerogelatins should be freshly prepared when wanted. They may be run out in molds, oiled with cacao-fat. The zinc gelatins may be used as vehicles for ichthyol, resorcin, chrysarobin, etc. When to be applied, they are melted and then penciled on the affected part.

Gelatinæ Medicatæ (Lamellæ, Eye Discs).—Discs of gelatin are made with some glycerin, containing alkaloidal salts for insertion and solution in the eye. They are applied to the eye with a pencil. The following is an illustration:

GELATINA ATROPINÆ SULPHATIS. 1-10 mg.

℞.	Gelatin	3vi	25
	Distilled water	3xxv	100
	Glycerin	gtt. vi	4
	Atropine sulphate	gr. iss	1
For 1,000 discs from a plate 7x12 inches (18x30 cm.).			

Salve Mull.—Under the name of "salbenmull," salve mulls, or steatines, ointments have been introduced of higher fusibilities spread on porous cloth, gauze or "mull" by Dr. Unna. These are mixtures of suet with lard and sometimes wax, in such proportion as to afford a consistence adapting them to being easily spread when heated without melting or running when applied to the body. They are intended chiefly for epidermatic effects, protective and antiseptic, but also for endermatic, astringent and resolvent action.

The mulls serve a distinct purpose in dermatology, since owing to the porous character of the fabric employed, they permit ready evaporation and thus prevent maceration of the epidermis which usually occurs from the prolonged application of more occlusive dressings. Their value as a form of application in intractable skin diseases has therefore been recognized by the highest authorities in this special branch of medical practice. The following are some of the most largely used:

UNGUENTUM EXTENSUM HYDRARGYRI CHLORIDI CORROSIVI. 2 p. mill.

℞.	Mercuric chlorid	gr. iii	2
	Alcohol	m. lxxx	5
This solution is incorporated with the following mixture previously fused:			
℞.	Benzoated lard	℥iv	5
	Benzoated suet	3xxiiss	90

UNGUENTUM EXTENSUM HYDRARGYRI CHLORIDI MITIS, 10 P. C.

℞.	Calomel	3iiss	10
	Benzoated lard	3v	20
	Benzoated suet	3xviiss	70

STERILE SOLUTIONS.

While many pharmacists are careful in making solutions, such as injections, eye washes, gargles, lotions, etc., the majority are not, and the result has been that many leading specialists in eye diseases, for example, prepare and dispense their own solutions, asserting that only through such procedure can they be assured of complete asepsis. The use of compressed tablets for hypodermic solutions has become general, chiefly because of their convenience and portability, but no doubt also from the fact that through their use solutions may be prepared extemporaneously with fresh water as pure as may be obtainable. In the larger cities where the water supply is more or less infected, the general practitioner no doubt is often compelled to use the service water instead of pure water, and the employment of the tablets must therefore in many instances be a source of infection. Weak, 1 per cent. water solutions of the alkaloidal salts: atropin, morphin, cocain, pilocarpin, also ergotin, permit germ growth, while concentrated solutions, i. e., 10 per cent. solutions of cocain and quinin, are easily kept germ-free. Solutions in germicidal solvents: alcohol, ether; iodin, mercuric chlorid and strong phenol solutions, are not admissible, but almond oil may be used for camphor and glycerin for iodoform. Carbolic acid—one drop for 160 minims (10 c.c.)—is the safest and altogether the best preservative for the water solutions.

Whether or not it may be regarded desirable to admit formulas for hypodermic injections into the U. S. P., there is no doubt that some general directions or formula should be introduced for sterilization. Not only for hypodermic injections are sterile solutions necessary, but also for ordinary injections, lotions or washes, nebulæ or sprays, and especially for collyria.

Dr. Fütterer, a most careful observer, reports several instances of the most serious results due to careless preparation of solutions for hypodermic use, and regards the

official recognition of a process for sterilization as of the greatest importance, since it would enable the physician to specify its employment for the preparation of solutions, etc. It would, moreover, direct the attention of pharmacists to the necessity for care in these preparations and would afford him at once an authoritative method insuring the best results.

INJECTIONES HYPODERMICAE. BR. PH. '98.

These solutions are prepared by dissolving the medicinal agent in distilled water which has just been boiled and allowed to cool. The antiseptic agents in the cocain and ergotin solutions are added before the medicinal agents are dissolved.

INJECTIO HYPODERMICA.

℞.	Apomorphin hydrochlorate .....gr. iss		1
	Ac. hydrochloric dil.....min. iss		1
	Distilled water .....min. clx	10	
℞.	Cocain hydrochlorate .....gr. xvi	1	
	Ac. salicyl.....gr. 1/4		015
	Distilled water .....min. clx	10	
℞.	Extract ergot .....gr. clx	10	
	Phenol .....gr. v		3
	Distilled water 3v	20	
℞.	Morphin tartrate .....gr. lxxx	5	
	Distilled water 3xxv	100	

The apomorphin and ergot injections are directed to be recently prepared.

ANTISEPTIC GAUZE.

Schimmelbusch, director of Bergmann's clinic in Berlin, states (1893) that moisture is one of the essentials for germ life, while "dryness" is one of its greatest enemies, and therefore dry dressing is always preferable to wet, except where the wound secretion is viscid and purulent and where the antiseptic material is employed for packing deep or incised wounds. It seems that the majority of surgeons prefer dry dressing for aseptic wounds, but wet or moist dressing for septic wounds, such as result from great laceration, etc. This question would go entirely beyond the scope of pharmaceutic discussion and is presented only to demonstrate the necessity for a distinction between wet and dry gauze and surgical dressings. While under the circumstances it may be inadvisable to recognize antiseptic gauze in the pharmacopeia, the admission of aseptic gauze would be highly desirable, either simply defined as to its character and properties, as the "tela depurata" in the German pharmacopeia and also "gossypium purificatum" in the U. S. P., or preferably by giving directions for the purification of the commercial gauze, as is done in the French codex by a process like the following:

CARBASUS ASEPTICUS.

Gauze of the required weight and mesh is boiled in water for 10 to 15 minutes, expressed, and washed two or three times in cold water. The expressed gauze is then allowed to macerate in solution of chlorinated soda for one-half hour, pressed and macerated in water containing 1 per cent. hydrochloric acid, rinsed in cold water several times, pressed, and dried in a closed vessel or sterilizer.

The gauze is quickly formed into rolls of the required dimensions and immediately transferred to sterile receptacles, preferably of tinned iron which are hermetically sealed.

DISCUSSION.

Dr. A. W. Baer, Chicago—Only yesterday I went into a physician's office in this place and saw the most complete outfit that I have ever seen. Here were all forms of apparatus for applying electricity, galvanic, faradic and static, some of which the owner would not in all probability use once a month. It occurred to me that if the pharmacist had these appliances, more especially in the smaller towns of 1,500 or 2,000 inhabitants, he might thus be of much assistance to the physician and keep himself occupied. Drugs are now only a part of the means for treating disease; and at the present day the large pharmaceutical manufacturing houses supply nearly all the preparations, to say nothing of the proprietary drugs unfortunately prescribed, thus doing the work of the pharmacist, supplanting him in his legitimate occupation.

GENERAL PUERPERAL SEPTICEMIA TREATED BY INTRA-ABDOMINAL IRRIGATION WITH NORMAL SALINE SOLUTION; RECOVERY.*

JAMES HAWLEY BURTENSHAW, M.D.
Adjunct Professor of Gynecology in the New York Polyclinic Medical School and Hospital.
NEW YORK.

A number of cases have been reported in which the abdominal cavity has been subjected to irrigation for puerperal sepsis, with indifferent results; but the accompanying report is unique, so far as I am able to determine, on account of the length of time the irrigation was practiced, the effect of the irrigation on the kidneys and peritoneum, and the ultimate recovery of the patient without the ordinary sequels of septic peritonitis.

The patient was a French woman, aged 24, unmarried, secretary to a woman of considerable wealth. She became pregnant during the latter part of August, 1902. During October and November she made frequent attempts to produce abortion by means of various drugs, hot-water vaginal douches and the like, but unsuccessfully. Early in December a meddlesome woman friend initiated her into the mysteries of instrumental procedure, and during the evening of December 9 she inserted an ordinary wooden penholder into the cavity of the womb and allowed it to remain there until the following morning. The membranes were not ruptured by this maneuver, but it was followed by the appearance of considerable blood, undoubtedly from a wound of the endometrium.

Abortion occurred during the afternoon of the 10th. The girl remained in bed until the next morning, when she arose, dressed, and resumed her usual duties about the house. I was summoned to see her at midnight, December 16. She had then been confined to bed two days. I found her temperature to be 104.4 F., her pulse rate 120, and her respiration rapid and shallow. She was somewhat delirious. Her abdomen was greatly distended, and was sensitive to the touch. The uterus was enlarged and soft, and the lochial discharge was scanty in amount and very offensive. From the housekeeper I learned that she had had several protracted chills, had vomited a number of times, and, to the best of the housekeeper's knowledge, had urinated but once during the previous twenty-four hours.

I catheterized her, and drew off all the urine the bladder contained, about four ounces. Later examination of the specimen demonstrated a specific gravity of 1,031, numerous hyaline casts, and a considerable amount of albumin. I may state here that a blood examination the following day showed the presence of almost innumerable streptococci, while the uterine scrapings developed streptococci and staphylococci in great numbers.

I flushed out the uterine cavity with two gallons or more of hot water, and, under very superficial chloroform narcosis, gently curetted it with a broad curette, taking great care not to abrade the endometrium. Considerable foul-smelling placental tissue and blood-clot were removed in this way, and the cavity was again copiously irrigated, this time with a 1 per cent. solution of lysol. I then introduced a suppository containing one dram of iodoform, fifteen grains of starch, and glycerin into the uterus, and packed that cavity and the vagina lightly with iodoform gauze. Nearly a quart of hot saline solution was then slowly introduced into the bowel, but the retention

* Read before the Polyclinic Clinical Society.

of even a small quantity of the fluid caused the patient so much pain that the enteroclysis was not persisted in. Meanwhile, I had opened the median basilic vein of the left arm and withdrawn about eight ounces of blood. This was replaced by about eleven ounces of hot normal salt solution. Marked improvement in the patient's pulse and respiration was at once manifest. Her body was then sponged with tepid water and alcohol, cloths wrung out in ice water were applied to her head and abdomen, and she was again catheterized. Two ounces of urine was obtained. A rather free, loose bowel movement had resulted from the attempt at enteroclysis. It was my intention to practice continuous irrigation of the bowel with the salt solution, but the patient complained so bitterly when the procedure was attempted that I desisted.

At 11 o'clock the next day, December 17, her temperature was again 104 F., having dropped during the early morning, after the infusion, to 103; her pulse was still 120, her breathing was rapid, and coma was developing. Only seven ounces of urine had been obtained by catheter. Subcutaneous infusion of saline solution was resorted to, the sites of the injections being the anterior border of the right axilla and under the left breast. The uterine and vaginal dressings were removed and a second iodoform suppository was introduced into the uterus, both cavities again being packed. The posterior vaginal fornix was markedly distended, owing to the presence of fluid in the peritoneal cavity. Absorption from the cellular tissue was extremely slow, although the patient showed temporary improvement after the injections were begun. Enteroclysis was again practiced, but with very unsatisfactory results.

I had intended to open the posterior cul-de-sac and pack the pelvis with iodoform gauze, but the grave condition of the patient, especially the almost complete cessation of kidney function, appeared to preclude all hope of success attending this procedure. The approximate quantity of urine passed during thirty-six hours had been nineteen ounces.

It then occurred to me that thorough irrigation of the entire abdominal cavity with normal saline solution might accomplish several things: first, remove the collection of serum, which undoubtedly already was infected by streptococci; second through absorption by the most extensive lymphatic system of the body, the kidneys would be more quickly and radically influenced; and, third, the general agglutination of the peritoneal surfaces as a result of the inflammation might, to a certain extent at least, be prevented.

Digitalin, strychnin and whisky had been injected hypodermatically at intervals since the night before. Several gallons of normal saline solution, prepared according to the formula of Locke, containing sodium chlorid, 3 iiss; calcium chlorid, gr. 3¾; and potassium chlorid, gr. iss to the quart of sterilized water, was prepared and kept at a temperature approximating 110 F. A four-quart fountain syringe and tube were sterilized by boiling. The patient was given a few whiffs of chloroform, and I made a two-inch incision into the abdominal cavity midway between the umbilicus and pubes. A rubber pad was placed under her to catch the overflow, and the tube of the syringe was inserted through the opening as far as possible into the pelvis.

For one hour the solution was permitted to flow into the cavity without intermission. Several times during this period the patient was turned on her side, and once on her abdomen, and pressure was made on her flanks to facilitate the exit of the fluid. At first, when this was done, the fluid returned was of a yellow tinge and contained many lymph flakes, but later it came away perfectly clear. Twenty minutes after the irrigation was begun ten ounces of urine of a specific gravity of 1,024 was obtained by catheter, and fifteen minutes later, six ounces. At the end of the hour her temperature had dropped to 102.6 F., her pulse rate to 110, she was in a profuse perspiration, and her mental condition had greatly improved. In all, forty ounces of urine had been drawn from the bladder, the last being of a specific gravity of 1,013. Five ounces of whisky had been given by the mouth. At one time syncope appeared to be imminent, but was averted by raising the foot of the bed to the level of a chair seat.

At 10 o'clock at night the irrigation was repeated for half an hour. A self-retaining catheter had kept the bladder drained, and forty-eight ounces of urine had been collected. The bowels had moved freely twice. At midnight her temperature was 102 F., and her pulse rate 116. A third irrigation was practiced the following morning, again for half an hour, and at three-hour intervals until 1 o'clock the next morning the cavity was filled with the saline solution. The next day, December 19, I closed the abdominal wound with stitches under cocain anesthesia. Her temperature then was 100.4 F. and her pulse rate 100. From 10 o'clock on the night of the 17th until noon of the 19th 210 ounces of urine were collected by catheter.

On December 20 her temperature and pulse rate were practically the same as on the day before, but her general condition had greatly improved. By December 23 the abdominal tenderness, except in each iliac region, had almost disappeared, the lochial discharge had increased in quantity and had ceased to be offensive, and all signs pointed toward recovery. On December 25 she had a decided increase of temperature during the afternoon, but this yielded readily to a moderately large dose of quinin. Intrauterine suppositories, each containing 20 grains of iodoform, were employed daily, and the uterus and vagina were lightly packed with iodoform gauze from December 18 to 22.

The patient was allowed to sit up January 4, and February 1 I examined her at my office. I found the uterus to be in good position and freely movable, but enlarged and somewhat sensitive to the touch. Both ovarian regions were sensitive, and the left ovary was enlarged. I could discover no evidence of pus foci in either broad ligament or elsewhere. Her bowels were constipated, but movements were unaccompanied by pain. The usual sequels of peritonitis appeared to be entirely absent.

In reviewing the line of treatment adopted in this case a number of pertinent queries are in order.

First.—Was there not danger of "drowning" the patient by introducing such great quantities of fluid into the abdominal cavity? I confess that I feared this might be the outcome, and had the kidneys not begun to functionate almost immediately after the irrigation was begun would have discontinued it at once.

Second.—Could not the same favorable result have been attained by intravenous infusion? So far as influencing the general systemic infection was concerned, I unhesitatingly reply in the affirmative, the opinion being based to some extent on recent reports of *lavage du sang* in streptococcic infection with a solution of formalin. In the cases reported, however, I believe that the favorable outcome was due to dilution of the poison in the blood current, and not to any germicidal influence exerted by the contained drug. The use of normal salt solution, I feel sure, would have been attended by as good results.

With regard to the attendant peritonitis, it undoubtedly was the local action of the saline which cut short the inflammatory process and which apparently prevented adhesion formation. I am able to explain this action only on the theory that, as streptococcic infection having the uterus as a starting point spreads to surrounding structures especially through the medium of the lymphatics, and as saline solution in the peritoneal cavity, as elsewhere, is primarily absorbed by the lymphatic system before entering the blood current, the consequent attenuation of the toxins almost at the point of origin would necessarily follow. Then again, while the primary effect on the blood vessels of hot water, that is, of water at a temperature ranging from 107 F. to 120 F., is to cause dilatation, and consequent engorgement, through the governing nerve mechanism, the secondary effect is that of contraction and cessation of congestion. As congestion is a natural concomitant of irritation, or

inflammation, the effect produced by its disappearance is obvious. While this explanation appears plausible, I am compelled to ignore the fact that the peritonitic inflammation in this case was of streptococcic origin, and consequently of a type which would be the least likely to yield to any form of treatment.

As regards the nonformation of adhesions, it is natural to suppose that. the inflammation of the peritoneum being held in abeyance and the surfaces being separated by the fluid, no opportunity would be afforded for such adhesions to occur.

Third.—Was there not danger of over-stimulating the kidneys? This factor was before me during all the time the treatment was being carried out. The conditions under which the infusions were given made it impracticable to measure the quantity of fluid administered, and I have no means of knowing even the approximate amount absorbed. The urine collected was carefully measured at frequent intervals, and it was evident that the flow from the kidneys was almost constant from the beginning. It also occurred to me that such long exposure of the intestines to the action of water at a temperature of 110 F. might have a deleterious effect, but such did not prove to be the case.

It is to be regretted that bacteriologic examinations of the blood were not made at intervals subsequent to the one made after the venesection. Two specimens were obtained for this purpose, but, owing to an error, were lost.

I am inclined to think that the satisfactory outcome was in part due to the character of the fluid employed. Dr. Harvey Cushing has called attention to the fact[1] that a solution containing 0.6 per cent. of sodium chlorid, that commonly employed, should not be regarded as a normal physiologic salt solution. He says:

> As a matter of fact, this is a most misleading designation, if we mean to imply by the term a fluid which is isotonic with the body fluids, and thus one that may be used with impunity in large amounts to replace directly in the circulatory system the loss of normal blood serum. A 0.6 per cent. salt solution is, in the first place, sufficiently hypisotonic to lake the corpuscles perceptibly if used in sufficient quantity and, furthermore, the recent observations of Loeb and his pupils have demonstrated the actual toxicity toward cellular activities of the pure sodium chlorid solution, that is to say, when uncombined with other salts. . . . Sidney Ringer, years ago, through an accidental observation, discovered the fact that minute doses of calcium and of potassium salts, when used in combination with the usual percentage of the sodium salt, made a solution possessing a much more beneficial effect in conserving the activity of an isolated heart than the sodium solution when used alone. Thus, for the first time, was pointed out the antagonizing action of small amounts of calcium and potassium toward the toxicity possessed by the single sodium ion, and thereby was given the first indication of the necessity of combining salines in order to obtain a more perfect infusion solution. . . .
>
> There can be no doubt that the pure sodium chlorid solution alone may, in certain ways, be injurious from its toxic effects; that, furthermore, a solution of the single salt, as weak as the 0.6 per cent. commonly employed, has a hemolytic effect on the red corpuscles. The desirability, therefore, of administering a fluid which shall be as nearly as possible isotonic with the blood—that is, shall have a molecular concentration corresponding to that of the liquor sanguinis—is evident.

381 West End Avenue.

1. "System of Physiologic Therapeutics," vol. ix. pp. 287 *et seq.*

Heat relieves the pain of inflammation, but increases that of suppuration. This is a valuable diagnostic aid in appendicitis.—"Med. Fortnightly."

FISTULA BETWEEN THE GALL BLADDER AND THE STOMACH.

A. BARR SNIVELY, M.D.
WAYNESBORO, PA.

The cause of fistula between the gall bladder and stomach is primarily cholecystitis with formation of one or more gallstones, which by irritation cause inflammation resulting in plastic peritonitis with adhesions to the surrounding structures. The gall bladder contracts and its walls become thickened and friable. The constant pressure causes the stone to produce an ulcer which develops into a fistula. This is Nature's cure, and may also be attended by no new symptoms or the previous ones may be relieved, especially if the stones pass into the stomach and if there is no obstruction in the cystic duct and the adhesions are not numerous enough to cause trouble.

A cholecystico-gastric fistula is relatively rare, the operative cases recorded, as far as I can find, being four in number. The following table affords information as to the varieties of fistulæ resulting from cholecystitis and their frequency in recorded cases taken chiefly from Courvoisier:

Fistulæ between the bile ducts themselves	8
Fistulæ between the bile ducts and retro-peritoneal tissues	4
Fistulæ between the bile ducts and the stomach	12
Fistulæ between the stomach and the liver	4
Fistulæ between the stomach and gall bladder	8
Fistulæ between the bile ducts and the duodenum	108
Fistulæ between the gall bladder and the duodenum	93
Fistulæ between the gall bladder and the jejunum	1
Fistulæ between the gall bladder and the ilium	1
Fistulæ between the bile ducts and the colon	50
Fistulæ between the gall bladder and the colon	49
Fistulæ between the common bile duct and colon	1
Fistulæ between the bile ducts and urinary passages	6
Fistulæ between the bile ducts and the thoracic viscera	10
Fistulæ between the bile ducts and the abdominal wall	184

Adopting Mayo Robson's statistics, out of a table of 10,866 autopsies made by Roth, Schroeder and Schloth, biliary fistulæ occurred 43 times. Fistula between the gall bladder and stomach was found only once. In general the cases of such fistulæ between the gall bladder and stomach give no symptoms, if any, none other than those of cholecystitis or cholelithiasis. Fistulæ between gall bladder and stomach are not always due to gallstones. Murchison records a case in which there was a fistulous opening between the dilated bile duct in the liver and the stomach. In this case, which was one of cancer associated with impaction of gallstones in the common bile duct, the bile flowed through three or four rounded orifices in the interior wall of the stomach, which communicated with the dilated bile ducts and superficial portion of the liver. This was evidently the source of the bile found in the stools during life.

Cancer of the gall bladder has been known to invade the stomach and thus bring about fistulous communication by ulceration. Ogle reports a case where the perforation of a simple ulcus ventriculi into the gall bladder caused a fistula.

Nichols, in an admirable paper, reports the case of a woman aged 85 dying two weeks after having an impacted fracture of the femur. At autopsy eight hours after death the stomach was found almost empty. The stomach walls were atrophied. The stomach was long and fusiform. The gall bladder was adherent to the stomach one-half inch from pylorus. A fistula between the gall bladder and stomach was found large enough to admit a small probe.

Mayo Robson mentions two cases, one of probable diagnosis, the patient having vomited gallstones, the other an operative case, where a fistula was found and adhesions separated. The edges of the fistula were pared

and closed with two rows of sutures; while the opening in the gall bladder was utilized to remove the gallstones and afterward to allow drainage. The patient made an excellent recovery and is now in good health.

Kehr, who has reported a series of 409 abdominal sections on account of assumed or acutally present cholelithiasis, with 3 3/10 per cent. mortality, mentions one case of gall bladder stomach fistula found in a patient where he drained the common bile duct; later a gastro-enterostomy was done, the patient dying eight days afterwards, unfortunately, of cholemic hemorrhage. He says:

A fistula between the gall bladder and stomach may, for example, develop entirely without symptoms, and only rarely will we be able to diagnosticate fistula of the gall bladder and stomach. But in most instances we will make the diagnosis not before or during the formation of the fistula, but first, as a rule, after it. This is incidentally remarked, also, quite well, for in general it is wrong to disturb the procedures of a natural cure. If stones are vomited, then one may not yet say that they have reached the stomach through the unnatural fistula. Just as easily as bile flows backward through the pylorus, even as easily can small stones come into the stomach and be vomited. In case of the vomiting of a large stone, the suspicion of a fistula between the gall bladder and the stomach is justified.

Oschner mentions one case of perforation of gall bladder into stomach. Naunyn, in statistics taken from Courvoisier, cites eight cases of cholecystico-gastric

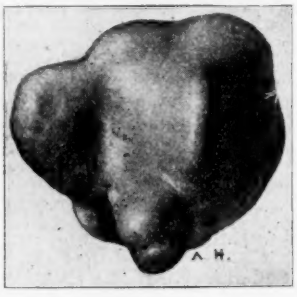

Fig. 1.—Gallstone (natural size). This stone is irregular in outline, is in no way faceted, indicating in a general way that the gall bladder contained no other stones. One can hardly imagine a stone of this size and shape escaping into the duodenum via the common duct and further, examination of the common duct at the time of operation did not show any thickening or the presence of adhesions as we would naturally expect had such a stone at one time lodged in the duct.

fistulæ. Murchison gives twelve instances in which gallstones were vomited, but only one of these cases, namely, that reported by H. Jeaffreson, was proved by autopsy to result from gastro-cholecystic fistula. Cruveilhier Larrates a case where the fistula between the gall bladder and stomach was found plugged by a gallstone. Oppolzer describes one in which the fistula was close to the pylorus. Frerichs, quoting Baille and Weber, refers to two cases.

The following case which I have to report of Mrs. M. of Altoona, Pa., was diagnosed by her family physician, Dr. E. E. Neff, through whose kindness I am able to present the following history:

She is 53 years of age, has had four children, the youngest of which is aged 22. This woman has had symptoms of gallstones since the birth of her last child. She has had colic from time to time during this period. Five years ago she had an attack of typhoid fever, being ill ten weeks. Dr. Neff saw her for the first time Oct. 21, 1899, in an attack of cramp, with all the symptoms of gallstone colic. By the free use of cathartics and turpentine stupes the patient was relieved until Dec. 27, 1899, when he was again called and found her in an attack more severe than the former one The pulse was 96, temperature 99, respirations 20, and the abdomen was somewhat distended, tense, tympanitic, and there was apparently entire cessation of peristalsis. A mass could be felt over the region of the gall bladder, giving pain on pressure and causing nausea, as though an edged instrument was being forced through the back.

December 28 the treatment was the same as in the former attack. The symptoms continued, abating for a short time and then coming on as severe as ever. The temperature and the pulse were the same. In the morning a high enema of glycerin was given; in the afternoon a large enema of white of egg and turpentine was administered, with some relief.

December 29 there was no change in the condition. A high enema of sweet oil and water was given with no apparent effect. About 8 p. m. a second enema of sweet oil was given; flatus now suddenly escaped with a report that could have been heard in the adjoining room. Peristalsis now started, and the symptoms gradually abated. The patient passed about 75 to 80 gallstones. The patient had had eructations of gas and bile in its purity. The abdomen became flaccid; the tympany disappeared. The pulse was 100, temperature 99, respirations 24. The patient had a restful night. December 31 the patient feels fairly well, there was some tenderness over the entire abdomen, more especially over the pyloric end of the stomach, which gave pain when palpated. The patient expectorated bile continually. Magnesium sulphate and olive oil were administered to keep the bowels moving.

Jan. 1, 1900, at 2 a. m., the patient had a return of the cramp and passed 97 more gallstones. The pain subsided immediately, and she felt entirely relieved. About two hours later she complained of a stoppage in the rectum and, on examination, Dr. Neff found a large stone which had lodged there (Fig. 1). This was easily removed with long forceps.

The patient steadily improved in strength, the bowels, however, continued to be very sluggish, and she complained of a burning sensation in the stomach. Operation was advised and insisted on repeatedly, but the patient flatly refused surgical interference. Any sort of food, predigested or otherwise, which was taken into the stomach gave pain as soon as it touched the stomach walls. The raising of bile was more marked at times, seeming as though the gall bladder had filled to the opening in the stomach, overflowing and causing nausea, expectoration and wretching, also causing the abdominal muscles and tissues around the gall bladder to contract and force most of the bile out. Dr. Neff said that the following symptoms caused him to make a diagnosis of a fistulous opening between the gall bladder and stomach:

1. Eructations of bile and gas from the stomach.

2. The tender spot persisting in the region of the pyloric end of the stomach.

3. Continuous obstinate constipation, which looked as though the lubrication were being removed by some other way—namely, by mouth.

4. Pain when anything was taken into the stomach.

This woman, while on a visit in Waynesboro, Pa., May 23, had an attack of gallstone colic lasting three hours, until relieved by hypodermic injection of morphia. The attack did not recur after the use of morphia. On May 25, I called in consultation Dr. Thomas S. Cullen of Baltimore, who advised operative procedure.

Operation May 29, Church Home, Baltimore, by Dr. Cullen, assisted by Dr. Gavin and myself. An incision was made to the outer side of the rectus, the gall bladder was small, and found to be intimately adherent to the stomach and surrounding structures (Fig. 2). The adhesions were gradually liberated until we came to a point where the gall bladder was fused to the stomach over an area fully 1 cm. in diameter. There was a distinct opening between the stomach and gall bladder at this point. The fistulous tract was divided and the stomach wound turned in on itself and closed with mattress sutures. The region of the gall bladder was carefully packed off and the gall bladder opened and drained. Two stones in the cystic duct were gradually forced up into the gall bladder and removed. The patient stood the operation well. On May 30, she had a chill, her temperature ran up to 105. Her

pulse was very rapid, but she was in fairly good condition. The temperature dropped the next day, but two or three days afterwards rose to 106. Since that time it rapidly came down to normal. She is very much better and her general condition is excellent. Patient continued to improve, and was discharged apparently cured, the first week in July. There was no escape of bile, and the abdominal incision had nearly closed. Since which time the patient has been able to indulge in a very liberal diet with no discomfort whatever and has led a very comfortable life. The operation demonstrated the fact that the pain produced by the ingestion of any food or liquid whatever was caused by the stomach pulling on the adhesions with which it was fastened to the gall bladder, liver and intestine.

Sept. 22, 1902, the subject of this sketch, after eating a hearty supper of tea, toast, soft-boiled eggs and sliced tomatoes, had a violent attack of gallstone colic; morphia was given hypodermically and, after a short while, patient was relieved. On examining the abdomen there seemed to be an abscess forming in the line of the incision. The point at which this appeared was about 1 cm. in diameter. Two hours later this ruptured and about one quart of clear, thin, almost straw-colored bile was discharged. After this the stiffness of the muscles and the pain about the waist line entirely disappeared. For three days the stools had no sign of bile and were of oatmeal-like appearance. On the fourth day they commenced to have the normal bile stain. About 50 very small gallstones now passed, and the fistula ceased discharging and rapidly granulated and closed. These gallstones had evidently come down from the liver and blocked up the common duct, as at the time of the operation the common duct was patulous. Since this time the patient has been regularly taking Sprudel salts and has had no discomfort in region of gall bladder, and has gained about twenty pounds.

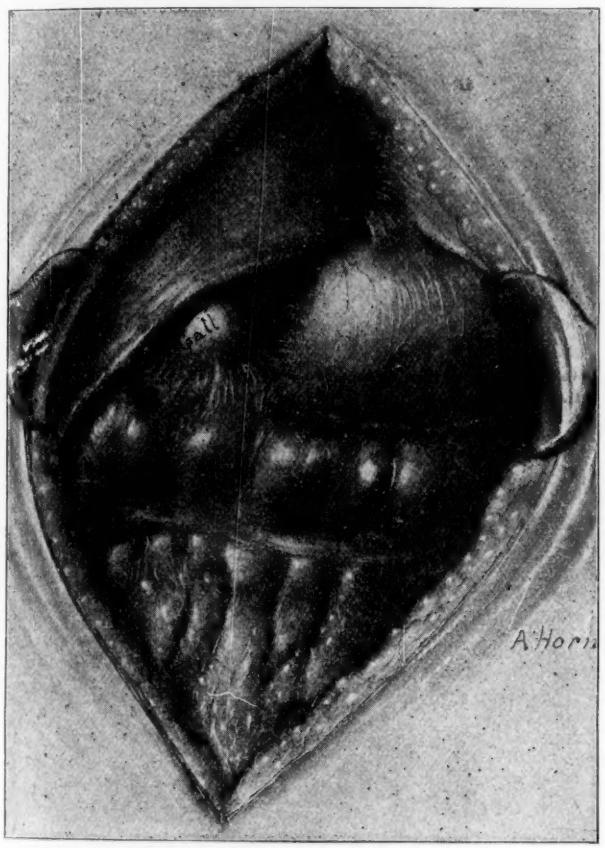

Fig. 2.—Gall bladder as viewed on opening the abdomen. The incision has been made through the right rectus muscle. The gall bladder is seen adherent to the stomach and to the transverse colon and there are adhesions between the surface of the liver and stomach. On separation of adhesions the condition detected in Fig. 3 was found.

Jan. 20, 1903, I received a further communication from Dr. Neff, stating that for some time he had noticed a swelling in the region of the gall bladder, which gradually increased in size and at one point there was pain on pressure. There was also a burning sensation extending through to the back in the vicinity of the lower angle of the right scapula.

On January 16, following the usual dose of Sprudel salts and oil, she felt something give way in the vicinity of the swelling and had a very copious stool, composed principally of bile. Next day a second copious stool, containing a large quantity of bile, was passed. The patient experienced a great deal of pain with the escape of the bile and, to use her own words, "It was as if coals of fire were passing through the bowel." After the escape of the large quantity of bile the swelling entirely disappeared. There has evidently been an acute inflammation of the common duct, followed by marked dilitation of the gall bladder.

The subsidence of the inflammation in the duct has allowed the gall bladder to completely empty itself.

Addendum: April 1, 1903. Dr. Neff reports the patient as in very good health and leading a very normal life with no sign of a return of the trouble.

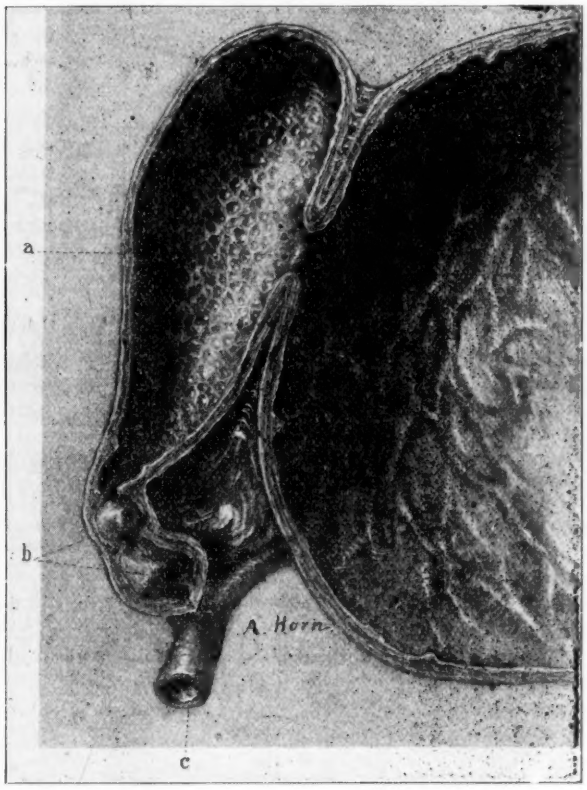

Fig. 3.—Fistula between the gall bladder and stomach. The gall bladder is densely adherent to the stomach and at *a* is a fistulous opening nearly 1 cm. in diameter between the gall bladder and the stomach. In the cystic duct are two small stones, indicated by *b*. These were readily pushed up into the gall bladder and removed. *c* is the common duct. At operation the stomach was freed from the gall bladder and the fistulous opening closed by a double row of silk sutures. The gall bladder was drained.

Mayo Robson sums up the subject of biliary fistulæ as follows: "Many of the fistulæ are mere pathologic curiosities, quite undiagnosable, and only capable of being discovered postmortem. Many must form and heal, leaving the patient cured, and thus are they not only not discovered, but they are probably not even suspected, for contrary to what one might suppose, fistulæ between the bile passages and the hollow viscera in the majority of cases heal spontaneously, leaving only visceral adhesions; so that the fistulæ are comparatively rarely found postmortem." It will thus be seen that the elaborate

figures given by Courvoisier and Naunyn can only give a very imperfect estimate of the frequency of these fistulæ which must be constantly overlooked or not recorded.

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LIGHT IN THE TREATMENT OF LUPUS AND OTHER CHRONIC SKIN AFFECTIONS.

J. W. KIME, M.D.
SUPERINTENDENT BOULDER LODGE SANATORIUM FOR TUBERCULOSIS.
FORT DODGE, IOWA.

Light and especially concentrated actinic light derived from the sun, is a specific in the treatment of lupus, chronic ulcers and other destructive lesions of the skin.

The first essential in the treatment of this class of cases is a practical and efficient apparatus, one with unlimited power and yet so easily manipulated that any physician may successfully operate it. The instrument which I use consists of a modification of the ray filter used in photography, and at a distance of 18 inches focuses, to a very fine point, a violet-colored light. At its smallest focal point it is intensely hot, but I have found that in certain cases nothing short of this strongly concentrated irritant light will sufficiently arouse the tissues to action to start the process of repair which, once started, continues to complete recovery.

The cell used is so constructed that it is readily adjustable at any angle to catch the rays of the sun. With the sun as a source of light the supply is unlimited, its strength is the greatest, it is richest in actinic power; it is, in fact, the one source from which all other lights are ultimately produced by means of mechanical appliances.

The light from the sun is accessible to every physician and it is free for the using. With a beam of sunshine one foot in diameter falling through the office window the instrument is ready for use.

The manner in which I treat lupus is as follows: The surface of the wound is first thoroughly cleansed, all scabs and crusts being removed, and it is then washed with water. I have avoided antiseptics as I wished to determine accurately the specific action of the violet rays. After this cleansing, I seat the patient with the cell placed between him and the sun and at a distance of about eighteen inches from him. I go over the entire wound surface and coagulate the albumin in the tissues until it is of a smoky white color. This usually takes but a few minutes. The treatment is then turned over to the nurse, who seats the patient a little farther from the glass, or a little nearer to it, so that the true focal point of the lens is avoided, and with the light strong, yet comfortably to be borne, she continues the application of the light for about twenty minutes.

A wet dressing of absorbent cotton and water is then applied until the following morning, when she removes the dressing and applies the weakened light for twenty minutes and reapplies the dressing. This dressing is again changed in the evening. The following day she repeats this treatment in like manner, and on the third day I usually apply the strong light again, especially to any part which seems to be lagging behind in its response to the irritation produced. In this manner the treatment is continued until healing is complete.

Around the edges of the wound granulations spring up within a few days, new integument begins to form around the borders, and gradually the size of the wound diminishes until complete restoration takes place.

Fig. 1.—Method of use of lupus machine.

I wish to emphasize the importance of the physician's applying the strong light himself and the necessity of closely watching that the parts are thoroughly cleansed twice each day. It is of the greatest importance that all crusts and scabs be kept from the wound, as these seem to be especially damaging to the process of repair.

The action of actinic light possesses a twofold potency: it is strongly germicidal and it is powerfully irritant to the tissues. By its irritant action an increased blood supply is furnished, new food is brought in abundance to the starving tissues and a retrograde

metamorphosis is converted into a reconstructive process. By its germicidal action a malignant sore is converted into a simple one, and Nature brings about the cure in the ordinary way.

Figs. 2 and 3.—Lupus vulgaris of nose.

In this connection will be recalled our treatment of chronic ulcers ten years ago, when we criss-crossed their

Figs. 4 and 5.—Lupus vulgaris of neck.

surfaces with deep cuts of the knife with a view to bringing about repair by the irritation produced by the

Fig. 6.—Lupus of cheek.

injury wrought by the knife. We now curette these ulcers with the same object in view. The irritant action of chemical light is much greater and can be extended to any degree at the will of the operator.

The apparatus used needs but little explanation, as it is very simple in construction and is easily operated. The solution of copper used is combined with alcohol to prevent freezing. The lupus lens consists of a plano-convex lens of eighteen inch focal length and is six inches in diameter. Behind it, at a distance of three-fourths of an inch, is placed a circle of plain plate glass. Between the lens and the plate glass is the space for the blue solution, which both cools the heat of the sun's rays and absorbs all but the blue rays, which contain

Fig. 7.—Same as Fig. 6. After treatment.

little heat, but are rich in chemical power. The lens is so mounted that it may be readily adjusted at any angle and the stand is of sufficient height that the patient may be seated in a chair while he receives treatment about the face or head. It may be dropped lower for use on other portions of the body.

The following records are presented as typical of results produced in the manner described:

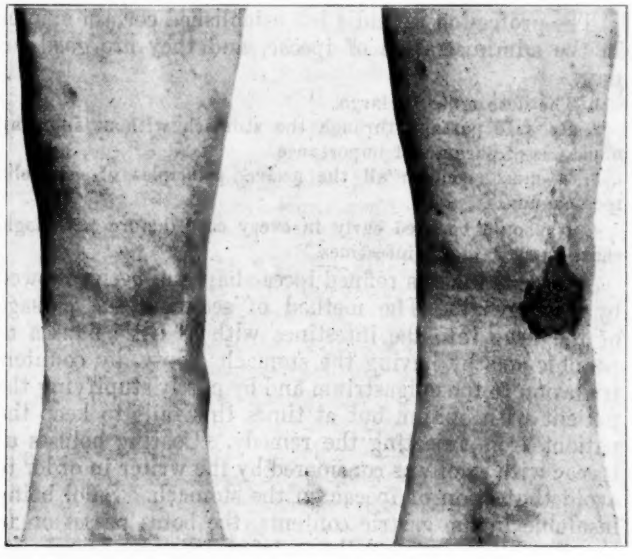

Fig. 8.—Chronic ulcer of leg.

Case 1.—M. K., age 21, domestic; has had lupus vulgaris on left side of nose for one year. Father died of lupus and from effects of operation for it. Two points shown in cut were involved. She has tried various washes and ointments. August 9 light treatment was begun. Light was used daily for half an hour until September 1. No nodules then remaining, treatment was discontinued. September 20 ulcers were completely healed. There has been no relapse during two years' time. See Figs. 2 and 3.

CASE 2.—M. G. has had lupus on side of neck six months. It has ulcerated deeply into the tissues of the neck, is one and one-half inches in length and one inch in breadth. She began treatment in April, 1901. All nodules had disappeared May 1. No relapse. See Figs. 4 and 5.

CASE 3.—Anna K., age 35, domestic. Mother died from tuberculosis. Present trouble, lupus, began two weeks ago. When first seen it had penetrated all the layers of the skin. There were several smaller patches near the angle of the mouth. Three treatments with light near the cautery point effected a cure. See Figs. 6 and 7.

CASE 4.—Fig. 8 shows result obtained in chronic leg ulcer of one year's standing in a man 52 years of age. Site of ulcer six inches above left ankle. The ulcer was about the size of a silver dollar. Light was used for six weeks, at the end of which period healing was complete.

Strongly concentrated actinic light is a most efficient remedy and it should be generally adopted by the profession that the quacks may not reap a harvest from its irregular and illegitimate use.

THE THERAPY OF DYSENTERY.

WILLIAM ROBERTS, M.D.
Lieutenant Assistant-Surgeon, U. S. A. (Late of Manila, P. I.)
FORT BRADY, MICH.

The therapy of dysentery is at present in no sense specific. While the causative agents have clearly set a dividing line between the amebæ on the one hand and bacteria on the other, the resulting treatment of either has not been uniformly successful. Quinin in amebic cases with the intention of killing the causative agent is highly irritating, as might have been expected, and does not reach all the amebæ, while the serum therapy of the cases of bacterial origin is in its infancy, though so far well spoken of.

This paper contains no new plan of treatment, for it is on the use of ipecac in dysentery, but the narration of several cases will illustrate what can be attained with this old and well-tried remedy.

The profession in India has established certain axioms in the administration of ipecac, and they are good today:

1. The dose must be large.
2. Its safe passage through the stomach without inducing nausea is of paramount importance.
3. It must contain all the active principles of cephaelis ipecacuanha.
4. It should be used early in every case, before pathologic changes occur in the intestines

Attempts to use a refined ipecac have not been followed by good results. The method of securing the passage of the drug into the intestines with as little nausea as possible was by having the stomach empty, by counter-irritation to the epigastrium and by partly stupifying the patient with opium, but at times this fails to keep the patient from rejecting the remedy. Coating boluses of ipecac with salol was considered by the writer in order to avoid the action of ipecac on the stomach. Salol being insoluble in the gastric contents, the bolus passes on to the duodenum where the salol is dissolved and the ipecac liberated, where it undergoes some change in the presence of the intestinal juices which prepare it for its therapeutic mission.

The ipecac is first made, *secundum artem,* into large pills containing one-half gram each, which when dry are placed in liquid salol, either melted by heat or dissolved by ether. Each pill is picked up on the point of a pin and withdrawn, the coating being accomplished in a short time. Ipecac prepared in this manner was used in the following cases, with uniform success both as to the safe passage of the drug through the stomach and prompt arrest of the disease:

CASE 1.—A. B., female, aged 45; American; seen in consultation; had been ill eight days. Diagnosis: acute specific dysentery, due to Shiga's bacillus. The patient was semi-comatose; pulse thready; there was considerable shock, and between thirty and forty discharges a day. She had been under saline purgation and rectal irrigation. Four grams of ipecac made into boluses coated with salol were administered. She immediately improved and subsequently recovered.

CASE 2.—A. C., female, aged 30; American; seen in consultation; had been ill for ten days, and was having twenty-five to seventy-five operations a day. There was tympany over the region of the descending colon, vesical and rectal incontinence, dry pointed tremulous tongue, anxious expression, considerable nervous and arterial depression, great weakness and constant nausea. The stools showed no amebæ; the Widal reaction was negative to Shiga's bacillus. Diagnosis: acute dysentery; cause unknown. She had been on saline and other unrecorded treatments. Seven grams of ipecac in boluses coated with salol were given. Operations ceased and prompt recovery followed.

CASE 3.—A. D., male; civilian; aged 25; American; had been suffering from discharges of blood and mucus for two months, was advised to go to the hospital, but declined. He was directed to go to bed and take seven grams of ipecac in boluses coated with salol, which he did, going to work the following day. He was seen four days later, and reported the disappearance of all blood and mucus, and that he was having one normal operation daily. He had been having from eight to fifteen operations a day prior to his treatment.

All cases of severity will not answer so promptly any more than will every case of malarial infection answer equally well to quinin; but if used early and in sufficiently large doses ipecac is probably more of a specific for dysentery than any other remedy of which we know at present. Most of the medical literature dealing with dysentery refers to ipecac with more or less praise. Dujardin-Beaumetz maintains that ipecac acts as a cholagogue aperient, and Yeo states, "Whether ipecacuanha acts in this way or not or as a special antidote to a specific poison, it is undoubtedly the most valuable remedy we possess for dysentery, especially in the acute form." Cunningham is reported as giving sixty to ninety grains of powdered ipecac, which, he says, "causes much nausea and vomiting, together with reduction of pulse rate, profuse perspiration, cessation of pain and tenesmus, and quieting of the bowels for twelve to twenty-four hours, the next motion being soft, fluid and free from blood or mucus."

A résumé of all the various articles of the materia medica which have been used from time to time in the treatment of dysentery can not but impress the reader with the utmost universal praise with which ipecac is mentioned. It is true other remedies have been extolled from time to time, but their history shows them to have been "the things of a day," and that ipecac deserves in some measure the encomiums awarded.

In 1672 ipecac was known in Europe. John Helvetius, grandfather of the famous author of that name, having been associated with a merchant who had imported a large quantity of ipecac into Paris, employed it as a secret remedy, and with so much success in dysentery and other bowel affections that general attention was drawn to it, and the fortunate physician received from Louis XIV a large sum of money and public honors on the condition that he should make it public. Local remedies and dietetic régime are indispensable in rendering comfort and aid to patients, but none can be said to produce a specific action nor are they followed

by such prompt relief as may follow the administration of ipecac in the therapy of dysentery.

In an article by Joseph Ewart, in which he outlines the usual ipecac treatment, going to great pains to impress the reader with the importance of avoiding emesis, he states that the drug should be repeatedly administered in order to secure its retention, and that:

The signal for the relinquishment of these doses is freedom from tormina and tenesmus, with the occurrence of refreshing sleep, feculent, bilious, or ipecacuanha stools, and restoration of the primary processes of assimilation. If no great amount of disorganization of the mucous membrane has taken place, these favorable changes are frequently noticed after the administration of the first or second dose. . . .

When ipecac fails to preserve the life of a patient its failure may generally be attributed to: 1, co-existence of abscess of the liver; 2, unchecked malarial poisoning; 3, permanent enlargement of the spleen, or liver, or both; 4, irretrievable constitutional cachexia; 5, Addison's disease; 6, morbus brightii; 7, phthisis; 8, strumous disease of the mesenteric glands; 9, peritonitis with or without perforation of the gut, or, 10, the existence of extensive sloughing or gangrene.

The advantages of the ipecac treatment—for the revival of which the profession in India and England is indebted to Mr. Scott Docker, of the Second Battalion of the Seventh Royal Fusiliers, stationed at the Mauritius—in the congestive, exudative and ulcerative stages of almost every form and type of acute dysentery, may be briefly stated. They consist in:

1. Its simplicity, its safety and its certainty, compared with any other method.
2. The promptitude with which the inflammation is stopped.
3. The rapidity with which repair takes place, (*a*) by resolution, or (*b*) by granulation and cicatrization.
4. Conservatism of the constitutional powers.
5. Abbreviation of the period required for convalescence.
6. Decrease in the frequency of recurrence.
7. Decrease in the frequency of abscess of the liver.
8. Diminution of mortality in cases treated.

All of these results are accomplished without calomel or other irritating purgatives or opium. There is no other remedy of which report speaks so highly as of this, and it is assumed that it has succeeded when the rest have failed, and its early use in every case is recommended.

Antitoxic or protective sera in the treatment of dysentery is noted as "doubtful but hopeful," in an article recently prepared by R. C. Cabot. Flexner states, as a result of his labors in this city, that "it is not unreasonable to hope that with the discovery of the specific cause of dysentery, particularly if it be a bacterium capable of being artificially cultivated, means will be found by which protective inoculation may be carried out with effect and safety. The fundamental conditions underlying such immunizations are now fairly established, and two general methods of accomplishing such results are open to investigation. In the first place, an active immunity may be achieved through the use of cultures of a determined grade of activity; in the second, the serum of animals may be employed either as a therapeutic agent or to provide a passive immunity.

"It has been found possible, through the use of cultures destroyed by heat or by the addition of chemicals, to protect small animals from the effect of subsequent inoculations of the virulent bacilli; large animals, such as the goat, when treated first with the dead and afterwards with the living cultures, develop a gradually increasing resistance to the inoculations, their blood serum assumes highly agglutinative qualities for the bacillus and, coincidentally, acquires protective and healing qualities.

"My own experiments relating to this topic have been carried out on small animals only, as no patients with acute dysentery have been seen by me since the serum from the goats has been available. Shiga has, however, been able to test the serum on human cases. According to Dr. Eldridge, up to Nov. 1, 1899, Shiga had treated with serum cases as follows:

1898.—In Laboratory Hospital: 65 cases, death rate 9 per cent.

1899.—In Laboratory Hospital: 91 cases, death rate 8 per cent.

1899.—In Horowo Hospital: 110 cases, death rate 12 per cent.

"During the period of 1899 there were under ordinary treatment at Tokyo:

At Horrjo Hospital: 116 cases, death rate 37.9 per cent.
At Horowo Hospital: 53 cases, death rate 37.7 per cent.
At Komagonic Hospital: 398 cases, death rate 34.7 per cent.
In private houses: 1,119 cases, death rate 28.5 per cent."

The application of curative sera to diseases of man was looked forward to as the utopian period of scientific therapeutics. Our expectations have been disappointed in more than one instance, but it is to be hoped that a serum of sufficient potency for the cure of dysentery will be given the medical world ere the present decade ends.

The chief objection to the use of ipecac being its frequent rejection, its use in compressed pills coated with salol is recommended as one method by which nausea and vomiting can be avoided, thus securing the full action of a remedy of world-wide repute in the treatment of dysentery, but a remedy often robbed of its specific virtues by faulty administration.

POST-OPERATIVE PULMONARY COMPLICATIONS.*

REUBEN PETERSON, M.D.
Professor of Gynecology and Obstetrics, University of Michigan.
ANN ARBOR, MICH.

In April, 1901, at a meeting of the Chicago Gynecological Society, I reported two cases of lobar pneumonia following operations. Both cases occurred in my practice within a single month, and were my first experience with this complication in a ten years' surgical practice.

In the first case, a young girl on whom I performed Alexander's operation, there was a distinct history of a cold, contracted shortly before the administration of the ether. The patient had a chill and rise of temperature within three hours after the completion of the operation. But one lung was affected, and the patient made a good recovery. The second case occurred in a patient from whom I removed a tube and ovary and suspended the uterus. The symptoms were not so severe as in the first case, nor could any history of exposure be elicited. She also made a good recovery.

At the same meeting Frankenthal reported a fatal case of double lobar pneumonia following an abdominal operation. Two other patients who were being prepared for operation at the same hospital about this time died from pneumonia before the operations were performed. This fact led Frankenthal to conclude that the pneumonia was not so much due to the ether or septic causes as to the great prevalence of la grippe at certain seasons of the year.

* Read by invitation before the Wayne County Medical Society, Detroit, Dec. 15, 1902.

Two cases of pneumonia, three cases of pleurisy and a single case of bronchitis following operations performed in my service at the University of Michigan Hospital during the past fourteen months, have renewed my interest in this variety of post-operative complication. Of the two cases of pneumonia, one died and one recovered.

CASE 1.—*(Gynecologic Case, 159).—Bilateral Salpingo-Oophorectomy for Cystic and Atrophic Appendages. Appendectomy. Lobar Pneumonia on Second Day. Death on Eighth Day.*—The patient, aged 39, married twenty-three years, had suffered for a long period from pelvic pain and tenderness. March 18, 1902, the adherent tubes and ovaries were enucleated by the abdominal route and removed. As the appendix showed signs of chronic inflammation, it also was removed. The operation was free from shock. When the ether was started, the patient's right eye was seen to be edematous and the conjunctiva injected. At the time no importance was attached to this condition.

The next day the eye symptoms had increased and, on investigation, it was found that the patient had shown symptoms of having taken cold a day or two prior to the operation. Forty-eight hours following the operation, the patient was seized with a severe pain in the right lower thorax and corresponding shoulder. The signs of pleuro-pneumonia gradually became distinct. By the fifth day there was dulness over the entire lower right lobe, with the usual accompanying signs of consolidation. Dr. Dock was called in consultation and obtained, by aspiration through the eighth interspace, a considerable amount of bloody serum. The relief, however, was only temporary. The signs of consolidation grew more marked, the temperature ranged higher and the pulse grew more rapid and thready. The patient died on the eighth day following the operation. Unfortunately no autopsy could be obtained.

CASE 2.—*(Gynecologic Case 293.)—Vaginal Celiotomy; Vaginal Suspension of the Uterus by the Round Ligaments. Bilateral Trachelorrhaphy. Perineorrhaphy. Acute Lobar Pneumonia on the Third Day. Recovery.*—The patient, aged 35, married, had shown no pulmonary symptoms prior to the operation performed, Nov. 21, 1902, which was simple and devoid of shock.

On the third day following the operation she complained of feeling chilly, and there was an immediate elevation of temperature to nearly 104. The fever remained at about this point until the crisis on the ninth day. For the first two or three days of the disease, cough was not a prominent symptom and only appeared on deep inspiration. It was at no time troublesome, and there was little if any expectoration. The physical signs of the lesion in the right lung were somewhat obscure at first. There were few adventitious sounds, and it was not until the sixth day that dulness over the affected area was marked. A slight change in the percussion note existed from the start and, with the other signs, left no doubt as to the presence of a central lobar pneumonia of the right side. There was a pseudocrisis on the eighth day. On the following day the temperature reached normal, there was a rapid clearing up of the lung, and the patient made a good recovery. The vaginal wounds healed by first intention.

Why did these patients contract pneumonia after their operations? Was the pneumonia due to direct irritation of the anesthetic, an ether pneumonia? Was it of septic origin? Could it have arisen from exposure and chilling of the patient during the operation? Such questions as these will arise in the operator's mind when a patient has pneumonia after an operation, unattended, as a rule, by much risk or mortality.

The distinctions between the kinds of pneumonia developing after surgical operations are not always borne in mind. Such a pneumonia may be an infectious disease, a true lobar or croupous pneumonia, or it may be an inhalation or bronchopneumonia. It has long been recognized that the last form is far from being uncommon after certain operations or when certain types of patients are operated on. Bronchopneumonia is apt to follow operations on the pharynx or larynx, and is very common after tracheotomies. The etiologic factor here seems to be the aspiration into the air passages of minute particles of food, which set up a severe inflammation in the finer bronchi. It is a true capillary bronchitis and its severity is directly proportionate to the amount of lung tissue involved. Bronchopneumonia also is apt to follow the administration of an anesthetic with or without operation in persons in the extremes of life. It is this factor which makes emergency operations, such as strangulated hernia, in young infants or children so much more dangerous than in adults. Very old people or those with weakened constitutions are also liable to develop bronchopneumonia after an anesthetic. Alcoholics are especially prone to this complication.

It is not so well known that true lobar pneumonia is not such an uncommon sequela of operative procedures. W. H. Prescott[1] looked over the records of various Boston hospitals for the purpose of ascertaining the frequency of this complication and could find only five authentic cases out of an estimated 100,000 etherizations. His conclusion was that ether rarely acts as an exciting cause of acute lobar pneumonia, and that the few cases of this complication may be classed as coincidences.

My own experience and that of other surgeons in the middle west with whom I have conversed on this subject, does not coincide with Prescott's statistics as to the relative frequency of lobar pneumonia after operations. Within two years I have had four undoubted cases in my own practice. The two just reported occurred out of 302 etherizations, of which 65 were for examinations and 237 for operations.

This brings up the question of whether the frequency of lobar pneumonia in my clinic can be explained by the nature of the anesthetic employed, its quality, or by the manner of its administration.

Ether is almost invariably employed as an anesthetic in the clinic, chloroform having been used only 17 times out of 319 anesthesias. The very best Squibbs' ether is used, so that the quality of the anesthetic can hardly be at fault. I have endeavored to perfect the technic of the administration of the anesthetic in the highest possible manner. An anesthetic chart is kept, showing the amount of ether used to render the patient unconscious, the total amount consumed during an operation and other data common to such charts. I personally see that the patient is not drenched with ether, and the anesthetizers are taught to attend strictly to their part of the work and nothing else. A good sign that the anesthetics have been administered well is that only twice has it been necessary to suspend an operation to revive a collapsed patient.

Particular care is taken at the clinic to avoid any unnecessary chilling of the patient during operation. Not only are the ordinary blankets employed, but such parts of the body as can be, are wrapped in cotton wool in order to preserve the body heat.

In order to prevent the hypersecretion of mucus so common during etherization, a hypodermic of atropia and morphia is given just prior to the anesthetic. If there be anything in the theory that the pneumococci find their way to the lungs through inspired mucus, as claimed by Whitney,[2] this danger is minimized by the

1. "Does Etherization Ever Cause Acute Lobar Pneumonia?" Boston Medical and Surgical Journal, March 28, 1895.
2. Boston Medical and Surgical Journal, Sept. 23, 1897.

action of these two drugs. I never hear in these days that distressing bubbling in the patient's throat. A tongue forceps, while always near at hand, is never employed, for the throat does not require swabbing.

The claim has been made, and perhaps justly, that the Trendelenburg position may be a factor in the production of pulmonary complications. That it impedes respiration during the operation, especially in fleshy patients, is a matter of common observation. The diaphragm is pressed towards the thorax by the viscera, which seek this position through the force of gravity or are crowded upward by the hands of the operator, who retains them in this unnatural position by gauze packs. It has been my custom for some time to modify the Trendelenburg position by partially elevating the head of the table after the intestines have been removed from and held away from the pelvis by packs. In this way one secures all the advantages of the Trendelenburg position while eliminating some of its disadvantages. The etiology of post-operative pulmonary complications, especially pneumonia, is obscure enough at best, and it behooves us to employ every means of prevention at our command.

It has been claimed that pneumonia is more apt to occur after abdominal than other operations. This is especially true if ether be the anesthetic employed. The statistics of Gurlt,[3] compiled from 52,677 anesthetizations, show that fewer deaths can be attributed directly to the use of ether than to chloroform or the mixtures. Pneumonia, however, is especially liable to occur after ether narcosis. Out of thirty such cases following ether narcosis, there were fifteen deaths. Thirteen of these occurred after abdominal operations. The explanation, according to Gurlt, lies in the suppression of the cough because of abdominal pain and tenderness.

As regards the so-called septic form of pneumonia, I believe that the term is too loosely applied. There is undoubtedly a hypostatic form of pneumonia which develops usually at the base of the lungs of a patient with peritonitis or other forms of sepsis. This hypostatic pneumonia differs not at all from that seen in other febrile conditions. The higher and longer continued the fever, the greater is apt to be the involvement of the lung. Another form of pneumonia arising from septic conditions elsewhere in the body is due to the lodgment of septic thrombi in ramifications of the pulmonary artery. Catarrhal pneumonia may surround the abscesses produced by the thrombi, and the fusion of these will give rise to areas of consolidation of the lung tissue. The diagnosis, however, of pneumonia of this description is not difficult, because of the accompanying signs of sepsis.

I am convinced that I have overlooked many cases of pleurisy, with or without effusion, in my operative cases in past years because of failure to make careful stethoscopic examinations where thoracic pain is complained of. In cases of moderate abdominal or pelvic sepsis, accompanied by pain and tenderness low down in the abdomen, it is a common error to ascribe pain higher up to these causes. More often are directions given to extend the area of external applications than are careful thoracic examinations made.

The following case illustrates the sero-fibrinous form of pleurisy undoubtedly of septic origin:

CASE 3.—*(Gynecologic Case 306.)—Vaginal Hysterectomy for Foul-smelling Submucous Polyp, the Size of the Fist, Projecting from External Os. Septic Vaginal Discharge. Sero-Fibrinous Pleurisy, Right Side. Recovery.*—The patient, aged 47, had flowed almost continuously for over a year. At entrance her hemoglobin was only 35 per cent., but was increased to 65 per cent. by the administration of iron and the control of the hemorrhage. Very little hemorrhage and no shock accompanied the removal of the tumor and uterus by the vaginal route (Nov. 12, 1902). There was some absorption from suppuration of the vaginal stumps, but at no time were the symptoms alarming.

On the fifth day following the operation the patient complained of sharp pain in the right axilla, increased by forced inspiration. Examination of the affected area revealed to and fro friction sounds and established the diagnosis of pleurisy. These signs were followed by those of a pleuritic effusion. The condition gradually subsided under the appropriate treatment.

Here was an undoubted case of pleurisy of septic origin, the micro-organisms passing upwards to the pleura from the septic focus in the pelvis by way of the lymph channels. Streptococci have been found in the fluid of such pleurisies. The fluid may be either clear, cloudy or purulent, according to the nature and virulence of the infection. Purulent pleurisies as complications of scarlet fever, measles and typhoid, are not uncommon. Sears quotes Betke as having found 58 instances of pleurisy as a complication out of 1,420 cases of typhoid.

The following case shows double septic pleurisy where the diagnosis was confirmed postmortem:

CASE 4.—*(Gynecologic Case 131.)—Bilateral Salpingo-Oophorectomy for Hydrosalpinx and Pyosalpinx in a Patient with General Miliary Tuberculosis. Bilateral Septic Pleurisy with Effusion. Death on the Fifth Day from General Suppurative Peritonitis. Autopsy.*—The patient, a frail girl of 22, had been ill for some months with signs referable to the pelvis. There was considerable operative shock, but she rallied under active stimulation. Septic symptoms developed almost immediately after the operation and resulted in death from peritonitis on the fifth day.

The day following the operation the patient complained of severe pain in the right chest and shoulder. The next day the pain was worse, although careful examination of the chest gave negative results. Within the next twenty-four hours pain had developed in the left thorax and to and fro friction sounds could be made out just below the fourth rib on the right side. The following day friction sounds could be heard over the left thorax.

The autopsy showed general suppurative peritonitis, general miliary tuberculosis and double pleurisy, more extensive on the right than the left side. There was a slight amount of cloudy fluid in each pleural cavity.

An interesting feature of this case was the difficulty in differentiating between beginning pneumonia and sepsis before the signs of both conditions became clear. There was at first very little abdominal pain and tympanites. The pulse was not particularly rapid nor thready, nor was the temperature markedly elevated. It was thought at first that she might be developing a lobar pneumonia until the ordinary signs of beginning general peritonitis appeared and were followed by an ever increasing pleuritic inflammation.

In still another case did a pleurisy develop after operation. Here, however, it is extremely doubtful whether it was due to sepsis.

CASE 5.—*(Gynecologic Case 100.)—Abdominal Hystero-Salpingo-Oophorectomy for Chronic Disease of the Uterus and Appendages. Left Sided Dry Pleurisy on the Fourteenth Day After Operation. Recovery.*—The patient, aged 40, presented the usual symptoms of chronic disease of the uterus and adnexa. There was no history of previous pulmonary disease. Operation Jan. 17, 1902, unattended by shock.

For two weeks the patient's convalescence was uninterrupted, the wound healing by first intention. On the fourteenth day

3. Annals of Surgery, 1896, vol. xxiii, p. 232.

she was seized with a sharp pain over the left thorax, increased by forced inspiration. Examination was at first negative. Friction sounds were obtained two days later. While the temperature was but slightly elevated, the highest point reached being 101, the pleuritic complication was excessively annoying. There were no signs of effusion, and the patient made a good recovery.

Possibly in this case the pleurisy was tubercular, the lighting up of some old focus, as it is conceded that the majority of pleuritic inflammations are due to this cause. It is hard to ascribe it to septic absorption, as there were absolutely no septic symptoms in the case.

CASE 6.—*(Gynecologic Case 70.)—Hystero-Salpingo-Oophorectomy for Chronic Disease of Uterus and Adnexa. Bronchitis Following Operation. Recovery.*—The patient, aged 46, was operated on Dec. 6, 1901. Considerable shock attended the operation. There was prompt reaction to stimulation. The following day there was a troublesome cough and complaint of oppression and pain in the chest. Examination the following day showed bronchial râles in abundance. The expectoration at this time was profuse and muco-purulent in character. The pulmonary symptoms subsided gradually under treatment. It was learned on inquiry that the patient had a cold just prior to the operation, but had not mentioned it.

I have recorded this case, not because it exhibited any alarming symptoms, but because such a bronchitis is not uncommon after ether narcosis. Under ordinary circumstances, even in the presence of a mild pharyngitis and laryngitis, the conditions present in an ordinary cold, I do not believe it is especially dangerous to administer ether. A slight increase of the irritation will be the only result, as a rule. But one is not sure of not having the grip germ present in the upper respiratory passages at certain times of the year, and experience has shown how deadly this organism is at times. The pneumococcus often found in the pharynx may not gain entrance into the system during a mild inflammation of the upper air passages, but when to this is added the irritation of the ether, it may actively flourish and place the patient in extreme peril.

For these reasons I am having more and more careful physical examinations made of patients prior to the narcosis and unless the operation be one of emergency it is postponed in the presence of even a slight cold.

IODOFORM DERMATITIS.

W. A. BRYAN, A.M., M.D.
ADJUNCT PROFESSOR OF SURGERY, VANDERBILT UNIVERSITY.
NASHVILLE, TENN.

It is the purpose of this paper to notice a phase of action iodoform sometimes assumes in the form of a dermatitis. By the term local iodoform dermatitis I have meant to distinguish this process from that showing constitutional involvement and an eruption scattered more or less over the body. This general involvement is well understood, but the purely local condition has been but little written of, and is probably not generally recognized as being produced by the application of iodoform, even when it does appear. My reason for calling this local iodoform dermatitis is the fact that it comes only on the surface surrounding the wound to which iodoform has been applied, produces no eruption or discomfort elsewhere and shows no special constitutional symptoms.

THE CLINICAL COURSE.

The appearance of the surface begins to change toward the end of the first 24 to 48 hours after application to an open wound, and resembles very much the poisoning of *Rhus toxicodendron,* with the exception that there is usually not so much redness present in the iodoform poisoning, for it is obscured by the vesicles that form on the skin. Numerous small vesicles appear around the point of application and increase gradually in the area they cover, until they may extend several inches from the focus. The vesicles toward the focus grow larger than those at the periphery because they are closer to the poison and get more of it. Often a number of vesicles coalesce and produce blebs of considerable size, which rupture and allow the contained serum to escape. Once the epithelium is broken the liberation of serum is more abundant in these than in any other lesions I have ever seen. In a few hours dressings are completely saturated with serum. The dressings thus stick closely to the wound, unless it is covered with an unguent. On removal of the cuticle the true skin appears as a thick, red, raw, edematous, uneven surface, often filled with little pockets of serum, resembling vesicles, but for the absence of the cuticle.

In a few instances the skin on which the blebs appear seems to be inflamed beyond the limits of vesiculation, but the majority of the cases I have seen have been devoid of such manifestation.

This eruption is likely to be mistaken for some other lesion, unless we remember not only its possibility, but as well its comparative frequency, and that it comes from iodoform no matter in what manner it is applied or to what surface. I have seen it come from the powder and the gauze, from application to the mucous surface and the skin. I have seen it called infection or eczema and treated for such, growing worse all the time.

The spread of iodoform dermatitis does not seem to follow any very definite rule, the usual method being by uniform extension in every direction. I have seen a case due to application to the stump made by enucleating an eye, spread upward over the brow and downward over the upper part of the face. Another case, the photograph of which is here presented, began at the metacarpophalangeal joint and extended up on the dorsum of the hand and down the dorsa and sides of the fingers. I saw another case with lacerated scalp have the whole side of his head above and below, in front of and behind the lesion, covered with ruptured, weeping vesicles. This fact seems to indicate that the spread of this process is through the connective tissue spaces rather than the lymphatics, as I at first thought.

The chief symptom complained of by the patient is an intense, intolerable itching; this symptom frequently begins before any change can be observed in the part complained of. It is incessant and described as a burning pain. Tenderness and irritability are other symptoms worth mention. These patients suffer intensely if great care is not used in removing dressings.

The duration of iodoform dermatitis is from one to four weeks under treatment, with removal of the cause. If iodoform is continued on the wound, in consequence of a false diagnosis, as that of infected wound, where iodoform is certainly a very useful drug, the symptoms will continue worse and worse until, from disgust, the surgeon tries some other drug.

How important must it be, then, that we recognize iodoform dermatitis when we see it, for, in the first place, almost any surgeon who uses iodoform in infected cases, having confidence in his drug, would increase the dose, and so increase the poison. Again, every patient who suffers once from this trouble ought to be told frankly by his surgeon that he has an idiosyncrasy for iodoform, that it poisons him, and in case of receipt of

another injury he should tell the attending surgeon of this fact.

The idiosyncrasy for this drug is peculiar in some respects. I have used the very best make of the drug I could find. In one instance a patient was treated with it without harm; shortly after his recovery he received another wound, which became infected, and on applying iodoform from the same bottle to it a typical case of dermatitis resulted. The patients who have, under my observation, developed this condition are usually of a sallow, unhealthy appearance, and somewhat anemic; but it is not confined to this type. I have seen only two or three cases developed in negroes, the failure to see any at all until recently having led me to believe it was not possible in them; but one case of a severe nature, that I saw recently, developed in a male negro, aged

Figure 1.

21 years, who had suffered from indolent ulcer of his leg for four or five months. I have been able to find one case, a trained nurse, on whose hand the vesicles would form if she even dressed a patient who was having iodoform applied, whether she came directly in contact with the drug or not.

The poison does not seem to be simply the iodin liberated. I have used iodin on as many cases as I have iodoform, yet not one of them has shown this vesicular type found consequent on iodoform. Iodin blisters many people very easily, but produces this blister under the cuticle, which, when it is peeled off, leaves a smooth, raw surface, not one showing irregularities like that from iodoform. Beside, iodin is limited in its action to the site of application, while the vesicles due to iodoform cover a wide area surrounding the original lesion. Again, the blister made by iodin, when it is opened and the cuticle taken away, does not tend to discharge serum indefinitely; the vesicles once ruptured in iodoform dermatitis, this discharge occurs without exception and is frequently very difficult to control. Iodoform seems to produce its effect by spreading through the cellular tissues of the skin; iodin by acting only on the surface. Recently I saw this same lesion produced by aristol.

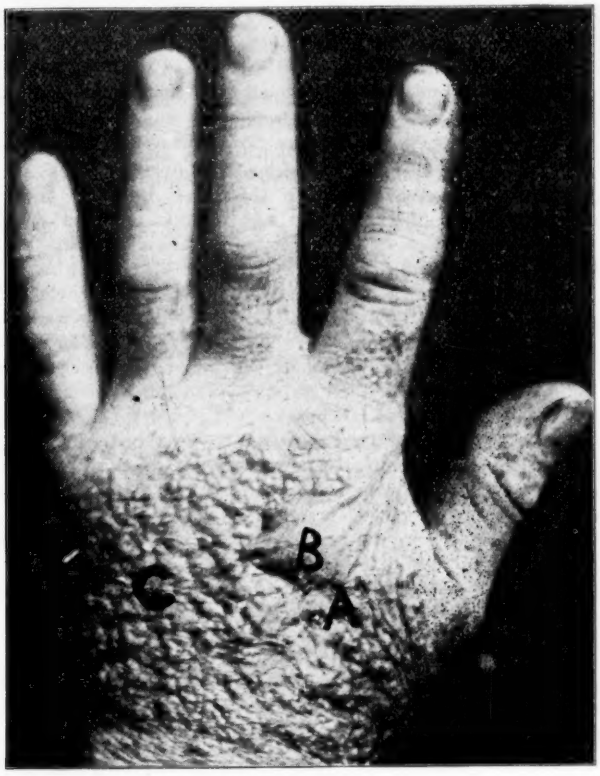

Figure 2.

Figure 3.

ILLUSTRATIVE CASES.

The description made above will be better understood by the study of accompanying cuts.

Figure 1 represents a case of iodoform dermatitis 44 hours after the first and only application of iodoform made to the stump left by enucleation of the patient's left eye by Dr. G. C. Savage. This case suffered no rupture of the vesicles and was well at the end of one week from the beginning of treatment.

Figure 2 is iodoform dermatitis 72 hours after an only application of iodoform to an infected laceration marked A. A large bleb is seen at B and surrounding this are the small vesicles C. The case was as follows:

J. W. G. came with slight laceration on dorsum of left hand, July 18, 1901. This was cleansed antiseptically and was treated with no application, except bichlorid dressing for four days, when a little pus appeared. It was then dressed with sparing applications of iodoform of the very best quality from a box, out of which I had used half the contents on other cases with no harmful result. He returned after forty-eight hours for another dressing, at which time the peculiar form of local iodoform poisoning shown in the cut was apparent. The blisters were clipped and carbolated vaselin applied every day.

Figure 3 shows an advanced stage of the process, eight days after the application was made (March 4, 1901) to the infected laceration of the fourth and fifth fingers and of the dorsum near the base of the index finger shown at points A—A. The first succeeding dressing was March 6, 1901, when the patient complained of considerable itching of the parts. On examination, several blisters, which surrounded lesions and contained a yellowish serum, were noticed. The iodoform was thoroughly washed off, but too late to prevent the dermatitis. The process continued until at its worst the hand appeared as this picture shows it. The points B—B are the dead but as yet unseparated epithelium; C—C are red inflamed areas where the epithelium has come away; D is a wart, having nothing to do with the disease. The chief characteristic of these wounds is their abundant exudation of serum. Notice in the region devoid of epithelium, the small granular bodies; they are accumulations of serum in the skin proper. This photograph was taken March 14, 1901, just eight days after first appearance of blisters and ten days after application.

TREATMENT.

The treatment of iodoform dermatitis is, in the first place, to stop the application as soon as the first symptom of itching is complained of and the first little vesicle seen; cleanse the surface thoroughly, using peroxid of hydrogen to loosen up the iodoform that has adhered to it, remove every particle of the drug, for any part of it left acts continuously as a poison and delays recovery. After cleansing, daily applications of carbolized vaselin 5 per cent., or an aqueous solution of carbolic acid, should be made until all vesicles disappear. I have obtained better results from this application than from any other. It is well at each dressing to immerse the part in an astringent solution in hot water for from 10 to 30 minutes. If dry dressing or dusting powders are used, they must be applied freely and repeated frequently, as they become early saturated with the exuded serum.

CELL IMPLANTATION IN THE PRODUCTION OF TUMORS.*

From the New York State Laboratory, Buffalo, N. Y.

LEO LOEB, M.D.

MONTREAL.

The problem of the origin of tumors is a part of the physiology of growth. In explaining malignant tumors pathologists made use of two of the most obvious instances of ordinary tissue growth, namely, embryonic development and regenerative phenomena. Accordingly two theories have been advanced to explain tumor growth. The first one explains tumors as originating from embryonal cells, either actually detached from their normal surroundings, or at least functionally detached. With or without changing their place these cells do not take part in the further development of their neighbors; they remain in an embryonal condition, are not functionally active as the normal surrounding tissue is, until at a later period they begin to make use of their latent, stored up forces. Being locally or functionally disconnected they do not find the tension of the neighboring cells opposed to them and they can now grow indefinitely. This is, in the main, Cohnheim's theory, especially as it has lately been further developed by Wilms. This theory, therefore, combines the two factors named above. It makes use of the embryonic character of the tumor producing cells, and of the fact that these cells are disconnected, implanted, as it were, in a strange environment. The lack of the normal tension or the regenerative factor of growth is added to the embryonic factor.

Some clinical facts seem to support this theory. Many teratomata can hardly be explained any other way. Many mixed tumors suggest such an explanation as to their origin. There seem to be tumors representing transitional formations between the teratomata on the one side and simple tumors, like sarcoma, on the other side. But it is difficult to explain many tumors, especially many carcinomata, on this basis. Therefore, Ribbert, though accepting the first theory as sufficient for many cases, added a supplementary theory, making solely use of the regenerative factor for the explanation of tumors. Through inflammatory processes adult cells become separated from their normal ground. Cells which are no longer subjected to the inhibiting influence of their neighboring cells begin, as ordinary wound healing shows us, to grow, until they find their normal connection with cells of the same kind. Cells which are perfectly detached from their normal ground will probably never find their normal environment producing the necessary tension and will therefore be able to grow indefinitely.

After having thus defined the two factors underlying these two theories, we have to consider how far these conceptions really adequately explain the growth of tumors.

The first problem to investigate is: how do displaced embryonic cells actually behave? A number of facts have been ascertained through experiments carried on in the last twenty, and especially in the last ten years, which to some extent enable us to answer this question. Still, our knowledge is yet limited, especially because some facts have been found in certain species of animals only, and in applying the results of these experimental facts we have to do it with this restriction. Let us first consider what becomes of the earliest embryonic cells, whose normal relation to their neighboring cells has been disturbed. If one-sided pressure is exerted on the segmenting cells of the egg of a frog, e. g., so that the normal succession of cleavage is altered and the relation of the first cleavage cells to each other is different from their ordinary relation, a normal embryo ultimately results. If the first blastomeres are entirely separated from each other each one develops a normal though smaller embryo, the number of cells formed being proportionately smaller, their size remaining unaltered. This holds good absolutely only up to the four-cell stage; isolated cells from the eight and sixteen cell stage still begin the normal development, and some of the blastomeres of the eight-cell stage run through the whole course of their development, but the blastomeres derived from these later stages stop at an earlier stage of their development. Thus the blastomeres derived from later stages differ in their fate from earlier blastomeres, not

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. Alfred Stengel, L. Hektoen and Frank B. Wynn.

as was to be expected by the former developing more specified parts of the whole, but instead, they form the first stages of whole embryos. No conclusive experiments have been made with regard to the fate of isolated blastomeres of later stages. Sufficiently large pieces of blastulæ also can develop perfect larvæ. At a somewhat later stage certain parts of the embryo must be present in the cut-out piece if the gastrulation shall take place. A certain morphogenetic localization has perhaps already taken place at this stage. Very few data are at hand for later stages. The observation of Roux, however, might be mentioned, who found very frequently in frog embryos with a closed medullary canal, isolated cells of the character of the much earlier morula stage.

Of importance are the recent experiments of Spemann. He found in triton at a stage when the medullary plate is already indicated, that by tightening a ligature across the medullary plate the anterior end of the posterior part will form a head just as the anterior part will do. We see that under these changed conditions ear vesicles can be formed from parts which, if the development would have proceeded normally, would not have formed any part of the head. That, however, does not yet prove that any isolated cell of an embryo at this stage is able to form these structures, but probably the connection of these cells with a large part of the embryo is necessary for this result.

Before drawing any conclusions from these experiments with regard to tumor formation, the results of experiments of a different kind shall be reported. Pieces of the tissue of embryos of different age were transplanted or injected into adult animals. At variable periods afterwards the fate of these pieces was determined. The following result was obtained: Most tissues grow and may even undergo a certain differentiation, corresponding probably (but how far that holds good has not been determined) to the differentiation they would have undergone normally. In some instances, where especial attention was given to this point, it was found that only a part of the transplanted tissue survives, that most of it degenerates and that the succeeding growth takes place from the surviving elements. The rate of growth is different for different tissues; it is most pronounced in the case of cartilage, but other tissues also grow, and epithelial cells may even arrange themselves in glandular form, even if they have been injected at such an early embryonic stage that no differentiation of this kind has yet taken place. Even glandular epithelia with granules characteristic for gland activity may develop. Ultimately, however, all these cells cease to grow and become resorbed. (Nevertheless, it is still to be determined whether certain cyst-like epithelial structures may not remain stationary, indefinitely, without becoming absorbed.) If we inject, instead of embryonal tissue adult tissue the result is, on the whole, the same. Of course, no differentiation comparable to the embryonic development takes place. Transplanted adult cartilage grows markedly less than embryonal cartilage. But a similar difference between the growth of adult and embryonic tissue does not seem to exist with regard to other tissues. In some cases adult cells even seem to grow better than embryonal cells. Further investigation into this question is needed. The data at hand at present do not justify the widely accepted idea that all embryonal transplanted tissues are much superior in their faculty to grow to adult tissues.

Let us now consider what conclusions might be drawn from these facts with regard to the formation of tumors. There are tumors consisting of a number of different tissues, with a limited growth, more or less resembling an irregularly formed embryo. Such teratomata might be derived from a detached blastomere, undergoing afterwards an autonomous development. Also Spemann's experiment might help us to explain certain tumors of a similar complex character. A wound or tear in the embryonic tissue of a later period might give rise to unexpected "heterotopic" formation, as e. g., to a brain-like tumor, at the caudal part of the spinal column.

But already here we find difficulties. In the first place we find these complicated tumors, although not exclusively, still in the majority of cases in the ovary and in the testicle. The explanation advanced to meet this difficulty is not sufficient and not quite satisfactory. In this connection it may be added that also mixed tumors of a less complex kind are, although not exclusively, mainly found at a few places, and again especially in glandular structures like the kidney, the salivary, lachrymal glands, and, to judge from recent findings, also in the thyroid gland. Roux observed early embryonic cells in different parts of the frog, not only in the "Anlage" of the genito-urinary organs; but, to my knowledge, just in the frog where such aberrant cells seem to be of a relatively frequent occurrence, teratomata or malignant tumors have never been described.

Nevertheless, the origin of this kind of tumors from blastomeres is the most probable one, although it must not be forgotten that it remains a mere hypothesis at present. Our knowledge does not seem to me to warrant us to exclude with an absolute certainty the older view of Waldeyer as to their possible origin from germinal cells, nor the hypothesis of Pfannenstiel as to their origin from ova. Mammalian ova may, in the beginning of the atresia of the follicles, show the first stages of segmentation. This segmentation is under the given conditions irregular, but irregular, also, is the segmentation of the ova of sea urchins in Hertwig's and Morgan's experiments. We must hesitate to exclude merely from data supplied by descriptive embryology possibilities which might be realized under conditions different from the ones under which the normal development takes place. Observations on the ordinary embryologic development would not have admitted the possibility of the development of isolated blastomeres to full embryos or of the formation of a typical lens from the retinal part of the iris in an adult organism. But there is a second difficulty. The growth of detached or separated embryonal cells leads, according to the above reported experiments, to a definite, limited growth. These embryomata, however, may start to grow like a malignant tumor, indefinitely, and may produce metastases. This also holds good of certain of the less complex mixed tumors, which otherwise might, in part at least, be explained as derived from detached embryonic cells or tissues of a later, already more differentiated type.

That leads us to the further consideration, can malignant tumors be explained by the detachment of cells, embryonic or adult? Malignant tumors grow apparently indefinitely; they may penetrate the surrounding tissue. Cells detached from the main tumor may, if they are not destroyed in the beginning (which probably frequently happens), multiply rapidly and form metastases. We saw that detached or transplanted normal embryonic or adult cells behave quite differently in the large number of experiments made. There is only one apparently divergent result published, the experiments of Lack with the scrapings of the ovary of a rabbit. That this apparently different result is due to an erroneous interpretation has been made very probable by Shattuck. How-

ever, it might be objected that there exist all degrees of malignancy. There really do exist tumors with different degrees of energy to grow. It has further been maintained, especially by Lubarsch, that the formation of metastases does not principally depend on the energy of growth of the tumor cells, but on a constitutional factor in the individual affected by the tumor (the capability to resorb transplanted cells being diminished). The transplantation of sarcoma and carcinoma, which has now succeeded in a sufficient number of cases, demonstrates, among other facts, that these objections do not hold good. The formation of metastases is caused by a primary increase in the energy of growth of the tumor cells. The transplanted cells rapidly multiply in a very large number of individuals of the same species. Secondly, transplanted tumor cells continue to multiply apparently without end, and therefore the difference between the transplantation of tumor cells and of ordinary embryonic or adult cells is very striking. With the tumor cell we seem to transplant some so far unknown factor which causes the cells to multiply without end. Different tumors have a varying energy; but this varying energy remains about constant in the same tumor in the course of a long series of succeeding transplantations. If we transplant pieces of a benign tumor, the transplanted cells remain benign. And even when we cut out pieces from such benign tumors at different intervals, the tumor did not, in the experiments made, assume a malignant character. On the other hand, transplantation of hypertrophic granulation tissue into different animals of the same species from which the original tissue was derived, was rapidly absorbed.

If Cohnheim in his lectures still maintained that experimentally transplanted cells may produce tumors, that, however, transplanted pieces of real tumors did not give rise to new growths—to-day we must reverse this statement. Neither the regenerative factor alone is able to change ordinary cells into cells of a malignant tumor, nor the embryonic character of the cells added to the regenerative factor. The results of experiments carried on from different points of view and with different methods corroborate each other. Ordinary embryonic cells, transplanted, have, under conditions, created experimentally only a limited growth. Therefore, we have no reason to assume that the results obtained so far are due to some accident and might be reversed some day. Still, there are factors which have perhaps not yet received the attention they deserve, e. g., the soil into which the tissues are transplanted, although a few investigations have been made into the question of the influence of the soil. It has recently been stated that tissues transplanted into ovaries had a more pronounced growth than those transplanted elsewhere. There does exist, however, another factor of more general significance. In the experiment of Spemann previously mentioned, embryonic tissue of triton could at many places produce a head, where, in the course of normal development the same tissue would have given origin to other organs. A head has, however, never been produced by injection of embryonic tissue. It makes some difference if the regenerating, detached, embryonic cells are on one side still in their normal connection with the rest of the body. It may be that the quantity of the regenerating substance has something to do with the different tissues regenerated by apparently the same cells, as especially Morgan suggests in some other connection. It may be that other correlative factors, perhaps of a specific chemical character, are here at play. There are other facts perhaps to be explained in a similar way. Pieces of hydra grafted to each other form different organs, if, after the union has taken place, both pieces remain of about the same size or if a large piece is cut off from one of the pieces. Perhaps also the fact that epithelium transplanted into epithelium has a different fate from epithelium transplanted elsewhere may belong to a similar category. The theories based on the supposition of detached, either embryonic or adult cells, as the cause of tumors, are at the present state of our knowledge not sufficient to explain the growth of malignant tumors. If transplanted epithelium enters into the normal union with connective tissue, the expansive growth of the epithelium will soon be arrested under formation of small cysts. If, however, such a regular union does not take place, the epithelium after a preliminary growth soon degenerates and connective tissue penetrates it. Decrease of tension added to sufficient nourishment is therefore not able to induce such epithelium to indefinite expansive growth, although such epithelium transplanted into blood serum, e. g., reproduces a number of the morphological appearances of carcinoma. Nevertheless, many, or perhaps most cells have a faculty for growth which is apparently almost indefinite, with regard to the quantity of tissue which can be produced and perhaps also to the time over which such growth can extend under favorable conditions. Why the transplanted tissues after a preliminary growth cease to continue to grow we do not yet know. Perhaps exhaustion of reserve material in the cells is the cause, perhaps some other factor plays a part. If we shall be able to experimentally prolong and increase the growth of transplanted tissue we will be nearer an understanding of the factors underlying the tumor growth.

The deficiency of the theories discussed here was, it seems, also recognized more or less by their authors. Wilms admits that some other unknown factor may come into play to produce a malignant tumor, though at other places the fact that the growing embryonic cells do not grow in their normal relation with neighboring cells seems to be sufficient to him to explain the boundless growth. Ribbert mentions "accommodation" of certain cells to the conditions of their new environment as necessary for their transformation into tumor cells. Israel, who applies similar principles as Ribbert, modifying them, however, in such a way as to include carcinomata arising from the surface epithelium directly and not from implanted cells, makes use of an hereditary transmission of an acquired increase in the energy to grow. Also Adami, in his theory which otherwise is based on different principles, makes use of an acquired "habit to grow." These or similar factors are perhaps not yet well defined, but they may be accessible to an experimental analysis. In this connection some recent experiments of Lyon might be mentioned, in which he succeeded in proving that an acquired immunity against potassium cyanid may be transmitted to succeeding generations of cells.

At the base of the theories discussed here lies a principle mainly gained by deductive a priori reasoning which was clearly expressed, especially by Weigert. This principle says that there do exist functional Reize (exciting causes), but no formative ones. All cell growth is caused by removing the tension of the neighboring cells. This theory itself is based on a theory of development, according to which no interdependence between normally developing parts of an organism takes place and all regenerative processes are caused by the presence of a reserve idioplasma called into action by removing the tension of the neighboring tissue. This

principle is a negative argument in favor of Cohnheim's and Ribbert's theories, excluding as it were the possibility of any other explanation for cell division. More promising, however, than the discussion of the above stated principle seems to be, at least with regard to the tumor problem, an analysis, and especially an experimental one, of the facts of embryonic development and of the regenerative processes. The latter must be an individual one for the different tissues which may behave differently. And here new methods must be worked out for new problems which suggest themselves. As Herbst and Spemann made it very probable that the touch of certain parts of the optic vesicle caused the skin of the head (and probably any part of the skin of the head) to form the lens, so G. Wolff demonstrated recently that the regenerative growth of the cut-off extremity of a triton does not take place if the medulla and the spinal ganglia are removed. In these cases we certainly can not speak of a removing of mechanic tension as the cause of growth. If the meaning of the removing of tension does not restrict itself to mechanic tension, it would be only used in a metaphorical sense and might mean any change of a chemical or physical nature; it would therefore essentially not be different in its meaning from the conception of a formative "Reiz." These causative factors for growth are at present still mostly unknown to us. Their analysis will also be necessary for a full understanding of the etiology of tumors. For even if micro-organisms shall have been definitely demonstrated as the cause of tumors, great as this achievement would be, the problem would still remain how such physical or chemical conditions created by the micro-organism can be the exciting factor of increased cell division.

DISCUSSION.

DR. H. D. PEASE, Albany, N. Y.—Before many of the phenomena observed in tumor formation and the production of metastases can be explained we shall certainly have to know more about the physiology of normal tissue elements, both embryonic and adult. Such questions lead to a discussion of the problems of cell division, tissue differentiation and inheritance. Even if it is eventually found that micro-organisms have an etiologic relation to malignant tumor formation, many of the phenomena which occur in such formations will require for their explanation a consideration of these problems.

REPORT OF A CASE OF TYPHOID PERFORATION WITH GENERAL PERITONEAL INFECTION

AND FIVE OTHER CONSECUTIVE CASES OF GENERAL SUPPURATIVE PERITONITIS; ALL RECOVERED.

J. B. MURPHY, A.M., M.D.
CHICAGO.

It is the prevalent opinion of the profession that practically all cases of general suppurative peritonitis should terminate fatally. That this is not true, however, is forcibly illustrated in the cases here reported. The questions arise, therefore: 1. What are the conditions which produce the fatal result? 2. Can these be overcome by medical or surgical treatment, and if so, when and how?

General suppurative peritonitis is not necessarily a fatal disease. The result of a general peritoneal infection depends on the following:

(*a*) *The type of infection.* If it be a virulent streptococcus type, with little pus formation, the peritoneum is rapidly denuded of the epithelial covering and becomes a "blistered surface" through which absorption rapidly takes place. Death in these cases is caused by the large quantity of the products of infection rapidly absorbed. If the poison be diluted or the pressure under which the infective products are retained be reduced the patient may pass over the critical period to a convalescence. If it be a staphylococcus or colon bacillus infection, the denudation of the peritoneum is slower, the danger of immediate overpowering of the patient by the absorbed toxins is diminished and the fatal termination is postponed often to four or six days, until such time as the fibrinous exudate which covers the peritoneum is exfoliated, taking with it the peritoneal endothelia. A rapid and fatal absorption may then ensue.

(*b*) *The period of time* that elapses between the infection and the time of operation. In the past the diagnosis of perforation was based on the combination of symptoms included under the term collapse, which was believed to occur a few hours after the perforation took place. At present the diagnosis of acute infectious perforative peritonitis is based on the symptoms of pain, nausea and vomiting, localized tenderness, circumscribed flatness on piano percussion, elevation of temperature and hyperleucocytosis, in the order mentioned. With these symptoms many of the patients give a history of diseased conditions which predispose to the development of perforative peritonitis. The operation should, therefore, be performed as soon as these symptoms are manifest. If it be postponed until the patient is in collapse the case will terminate fatally. If it be performed, however, in the early stage, the "peritoneal shingles" or endothelia will be found intact, thus preventing absorption. When these natural barriers to absorption are destroyed, as is the case when operation is delayed, a fatal termination can not be obviated.

(*c*) *The tension* under which the products of infection are retained in the peritoneal cavity. The mere pressure of pus in this situation does not necessarily mean absorption of the infective products. The greater the pressure under which the pus is held in these acute conditions the more rapid the absorption. This is true, not only in the peritoneal cavity, but also in suppurations in the cellular tissue in any portion of the body. Remove the pressure and there is an almost immediate cessation of absorption, as is shown by the sudden subsidence of the symptoms of infection after draining an abscess in any portion of the body, notwithstanding that pus remains in this cavity after it has been opened. The reduction of pressure is one of the basic principles of treatment of cases of general suppurative peritonitis. We believe, and have shown, that irrigation is not necessary in the peritoneal cavity any more than it is in circumscribed suppurations of other tissues.

(*d*) *The diffusion* of the infective material through the peritoneal cavity. It is well known that when this diffusion takes place in the upper half of the peritoneal cavity the danger is enormously increased, because absorption from this part is much more rapid than from the lower or pelvis portion. On this basis all patients were kept in the semi-sitting position, at an angle of thirty-five degrees, from the time they came under observation, both before and after operation, until the pus was entirely removed. In all the cases an effort was made to allow the pus to settle into the pelvis, where it would be free from pressure and could be easily carried off by the drainage tubes. In this way absorption took place slowly and the patients were saved from the primary, overwhelming dose of toxins, which is so fatal.

(*e*) *The administration of antitoxins and other substances* to antidote or dilute the immediate depressing effects of the poisons absorbed from the peritoneum. Antistreptococcus serum and unguentum Credé were administered to our patients, on the conviction that they contributed to this result to some degree. We believe that time is saved by their administration, in counteracting the effects of the poison, and the patient's chances for recovery are, therefore, increased. Saline transfusions were given some of the patients for the same purpose, as well as to increase the arterial tension when low.

(*f*) *The length of time the patient is kept under the anesthetic* and the extent of manipulation of the intestines and other tissues to which the patient is subjected during the operation. The patients were not killed on the table. I believe a large number of lives are sacrificed in operations for general peritonitis by excessive manipulation of the infected tissues and by sponging and irrigation of the peritoneal cavity. If the patient becomes severely depressed, collapsed or shocked on the table, it is practically certain that death will ensue; and, therefore, no operation which produces these conditions is justifiable. In all of these cases a general anesthetic was used, as it is my belief that sufficient time can be saved by working under general anesthesia to more than compensate for the dangers attending its use, and time is of vital importance in operations of this character.

The following report will illustrate the various phases of the individual cases:

CASE 1.—Mr. J. D., aged 35 years, laborer. Admitted to Mercy Hospital, Nov. 18, 1902. Patient referred to me by Dr. D. Collins, with diagnosis of typhoid perforation.

PRESENT ILLNESS.—The patient was in the third week of a well-defined attack of typhoid fever and was progressing favorably. At 3 p. m. on the day of admission to hospital he experienced a sudden, severe, sharp pain in the umbilical region. Soon after onset of pain it became general over the lower half of the abdomen, he vomited and a considerable degree of tympany developed. When I examined him at 8 p. m. he was in the semi-sitting position and the abdomen was moderately distended and tender all over. On percussion there was tympany over the upper part, with dullness in the right flank and lower portion of the abdomen. The line of dullness changed with change in position of the patient. Dr. Collins' diagnosis of typhoid perforation was sustained and patient immediately sent to hospital for operation. In conveying him from his house to the hospital he was kept in the semi-sitting position on the stretcher and this position was maintained on the table throughout the entire operation. Ether was the anesthetic used. The pulse before beginning the anesthetic was 130 and respiration 30, rapid, shallow and entirely costal in type. There was, however, in this case, an absence of the symptoms of collapse. Camphorated oil, minims 10 and strychnia sulph. gr. 1/30 were given hypodermically before starting the anesthetic.

Operation.—10 p. m. Incision below the umbilicus and through the right rectus muscle was made in opening the abdomen. As soon as the peritoneum was incised a large quantity of yellowish green fluid containing flakes of lymph exudate, welled out of the opening. This fluid was free in the peritoneal cavity and there were no adhesions. The entire peritoneal surface was deeply congested and covered in places with white patches of exudate. The luster and gloss of the membrane were, however, preserved. The caput coli was first sought and drawn out of the wound, and the ileum traced from here. On drawing the latter out it was found greatly thickened in places and its peritoneal covering showed the most intense degree of congestion and infiltration. About twelve inches from the ilio-cecal valve a perforation of the intestinal wall was found, 4.5 m.m. in diameter, through which the contents of the ileum were escaping. The perforation was in the center of an indurated, infiltrated, Peyer's patch, and there were no evidences of the formation of adhesions in the neighboring intestinal coils. The perforation was closed by a double row of silk Lembert sutures, introduced in the healthy tissue, well to the side of the infiltrated Peyer's patch. In this way the bowel wall was folded inward longitudinally, from each side, and it completely buried the ulcer, with the perforation in its center. When the suturing was completed the lumen of the bowel was considerably narrowed, but this was unavoidable, as any sutures introduced into the infiltrated tissue would have torn through After closing the perforation the coil was dropped back into the abdomen and the incision closed in separate layers, catgut for the peritoneum and fascia of the rectus and horsehair for the skin. The fluid was not sponged out. Two rubber drainage tubes, ½ in. in diameter, were inserted deep into the pelvis, and came out through the lower end of the incision. Through these tubes the pelvis was irrigated with normal saline solution and a large quantity of greenish fluid escaped. The pulse became very weak and rapid towards the end of the operation, so a quart of normal saline solution was given intra-venously. Time of operation, 27 minutes.

Patient was returned to his room at 10:40 p. m. and placed in bed in a semi-sitting posture at an angle of 40 degrees. This position was maintained for ten days. After he was put to bed his pulse was 140 per minute and weak. Camphorated oil, minims 10 and strych. sulph. gr. 1/30 were given hypodermically. At 11:30 pulse was 140, very weak, and respirations 40 per minute. A second intra-venous transfusion of 2% normal saline solution was given and hypodermics of: caffein gr. 2, camphorated ether minims 10, strych. sulph. gr. 1/30, and digitalin gr. 1/50, ordered every four hours. At 12 p. m. 10 c.c. of antistreptococcus serum was given hypodermically and the dose repeated at 3 and 6 a. m. He rested quietly during the night except when disturbed to take his medicine; passed urine freely. The pulse gradually became slower and stronger and by 8 a. m. was 100 per minute, with temperature 99 (Ax) and respirations 34. Wound was dressed and the dressings found saturated. Inunctions of ung. Credé were ordered daily. At 11 a. m. pulse again became weaker and he was given a saline enema, which was retained P. m. temperature 100.6, pulse 100. Saline enemata were repeated after this every five hours and water given freely by mouth after 6 p. m. the day following the operation; the urine showed albumin and hyaline and granular casts.

November 20, a. m., temperature 101.4, pulse 96, respirations 26. He had a good night and expressed himself as feeling well. He vomited several times during the day, complained of some epigastric pain and slept at intervals. The camphorated ether and caffein which had been given hypodermically every four hours were stopped, but the digitalin and strychnin sulph. were continued. His pulse during the day decreased in frequency from 100 in the morning to 86 at 6 p. m., at which time his axillary temperature registered 100.6 and respirations 28. 1,300 c.c. of urine was excreted during the 24 hours. Bowels did not move, and he retained his enemata. Urine still contained albumin and casts (hyaline).

November 21, a. m., temperature 99 (ax.), pulse 68, respirations 30. Patient did not sleep much during the night, but rested quietly. He vomited several times during the day and developed a slight cough, with moderate amount of expectoration. During the afternoon two low enemata were given at intervals of four hours, and produced slight bowel movement. P. m., temperature 101 (ax.), pulse 88. Digitalin stopped. Urine abundant.

November 22, a.m., temperature 99.6, pulse 76; p. m., temperature 100.6, pulse 80. Bowels moved freely. Slight cough persists and sputum blood tinged.

November 23, a. m., temperature 98, pulse 70; p. m., temperature 99.6, pulse 74. From this date pulse and temperature remained practically normal and patient convalesced rapidly. He sat up in chair December 8. Drainage tubes were gradually shortened and diminished in size as the discharge lessened, and

were removed altogether Dec. 10. He was discharged from the hospital with wound almost entirely closed December 12.

CASE 2.—Mr. F B. T., aged 26 years. Admitted to Frances Willard Hospital July 12, 1902.

Previous History.—Negative. Family history, negative.

Present Illness.—Three days previous to admission to hospital patient was attacked with severe pain in the right iliac fossa, accompanied by nausea and vomiting. Temperature reached 100 on the evening of the attack. The next day the pain was more circumscribed and remained so until the morning of the third day, when it suddenly became general over abdomen, and considerable tympanitic distension of the abdomen developed at the same time. It was decided that the patient had a perforation of his appendix, with general peritonitis. He was transported seven miles in a wagon to the railway station and four hours on train to Chicago. When he arrived here his pulse was 130 and temperature 101.5. Abdomen was much distended and flat on piano percussion in the flanks and lower portion. Leucocyte count on the evening of the third day showed 50,000 per cubic mm.

A diagnosis of perforative peritonitis was made, though the patient was not vomiting and not in the least collapsed.

Operation.—July 12, 1902. Abdomen opened by ordinary appendiceal incision through outer edge of right rectus muscle. When the peritoneum was opened pus with gas shot out, so great was the tension. The appendix was gangrenous and perforated. Appendix removed and large drainage tube inserted into the pelvis and right iliac fossa. No abdominal sponging or irrigation was used. There was no attempt on the part of the intestines or omentum to wall off the infective process. The bowel retained some of its normal gloss, but the pus was very offensive and the case did not look promising. Abdomen closed by figure of eight sutures of silkworm gut down to the drainage tubes.

Patient was placed in his bed in the semi-sitting position, at an angle of 35 degrees. Repeated saline enemata were administered and large quantities of fluid given by mouth immediately after the patient regained consciousness. The tubes were left in for two weeks, but during this time were gradually shortened as the discharge lessened. The temperature rapidly subsided to normal after the operation and the patient made an uninterrupted recovery. In this case, as in most of the others, inunctions of ung. Credé were given daily for one week. Anti-streptococcus serum was not given.

CASE 3.—Mrs. K., aged 50. Admitted to Mercy Hospital Oct. 12, 1902. Family history negative. Personal history negative.

Present Illness.—After breakfast, October 9, patient was taken suddenly ill with severe cramping pain in umbilical region. Soon after onset of pain she became nauseated and vomited freely. Pain continued general over abdomen for sixteen hours, when it became localized to the right iliac region and vomiting, which had been persistent, subsided. She had fever during this time, but does not know how much, and was very tender to pressure in the appendiceal region. After 36 hours pain lessened, but soon afterwards reappeared and was severe. It was now general over the entire abdomen and not localized to the right side. I saw the patient in consultation with Dr. George W. Webster on the evening of October 12, and concurred in the advisal of immediate removal to the hospital and operation.

Operation.—October 12, 10:30 p. m. Usual appendiceal incision through the right rectus muscle into the peritoneal cavity. On incising the peritoneum pus welled out. There were absolutely no adhesions anywhere in the peritoneal cavity, and the pus was distributed everywhere. The appendix presented considerable swelling and was perforated near its base, the perforation taking place into the free peritoneal cavity. No fibrinous exudate was found on the intestines, and there was no effort at agglutination. After ligating the mesentery and appendix, the latter was amputated. Two large rubber drainage tubes, ½ inch in diameter, were inserted, one deep in the cul-de-sac and one in the right iliac fossa. The abdominal wall was closed with figure of eight sutures of silkworm gut. No irrigation was used and the pus was not sponged out. In this case the peritoneum showed considerable congestion, but the normal gloss was retained, showing that the endothelial covering was intact. Patient was put to bed in sem-sitting posture at an angle of thirty-five degrees. With each inspiration the pus welled out of the pelvis through the tubes. At 11:15 p. m. pulse was 120, and at 12 126, with respirations of 40. As soon as she was put to bed she was given strychnia sulph. gr. 1/20, digitalin gr. 1/50, caffein cit. gr 2 hypodermically.

October 13, patient rested quietly during night and vomited only a few times. She took water freely and retained much of it; a. m., temperature 99.8, pulse 98; p m., temperature 101, pulse 104. Hypodermics of strychnia and caffein were continued every four hours. Dessertspoonful doses of the infusion of digitalis were ordered every three hours to increase the secretion of urine, which was small in quantity and contained considerable albumin and many hyaline casts. Patient vomited only once during the day and took water freely.

October 14, patient had good night; a. m., temperature 99.2, pulse 98, respiration 30; p. m., temperature 99.6, pulse 96. Urine now abundant, no albumin present, but hyaline casts still numerous. About noon patient was given a saline enema and this was followed soon afterward by a slight bowel movement. She had two more small passages during the afternoon. In the evening the following prescription was ordered every six hours: Ox gall grs. 5, ex. belladonna gr. 1/20, ex. nux vomica gr. ¼, aloin gr. 1/10.

October 15, a. m., temperature 99.2, pulse 96; p. m., temperature 99.4, pulse 88. Patient expelled considerable gas from bowels, but did not have a free movement. Wound was discharging freely.

October 16, during the preceding 24 hours patient passed 1,500 c.c. of urine, which contained no albumin and very few casts. The infusion of digitalin discontinued, as were also the hypodermics of caffein; a. m., temperature 99.8, pulse 90; p. m., temperature 99.6, pulse 96. During the day patient had five bowel movements and passed a good deal of gas.

October 17, a. m., temperature 99, pulse 96; p. m., temperature 100.2, pulse 84. From this date until October 21 temperature in the evening ranged between 99.6 and 100.4, with pulse 88 to 96. The discharge continued quite profuse and was somewhat offensive. Bowels moved daily during this time and she complained but little of pain in abdomen. From October 21 to November 4 p. m. temperature ranged from 99 to 99.6, with pulse from 82 to 90. During this time the discharge decreased in quantity and the wound was dressed with gauze soaked in a saturated solution of sodium bicarbonate to overcome the offensive odor. She complained little of pain; bowels moved freely daily and urine was abundant. The drainage tube in the right iliac fossa was removed October 25 and the pelvic tube four days later.

November 4, patient complained of pain and tenderness in the left iliac fossa and her temperature on this date went up to 101 in the afternoon. The next day a tender induration was palpable in this region and it was evident that pus was here retained. Induration and temperature persisted until November 8, when the accumulation discharged spontaneously into the canal left after removal of the drainage tube. After this her temperature rapidly descended to normal and continued so. Patient sat up in chair November 8, and was discharged from the hospital November 23, with the wound almost healed.

CASE 4.—R. G., male, aged 16 years. Referred by Dr. Anna Dwyer.

Previous History.—During past three years had been subject to frequent attacks of abdominal pain, at times localized in right iliac fossa; no severe acute attacks. Present illness began October 18, 1902, with intermittent abdominal pain, which continued until next afternoon, when he vomited Pain generalized at first, later localized in right iliac region. Cathartics were administered by attending physician, but were not retained. Vomiting continued for 18 hours, when it became less frequent; the pain, however, remained severe. At 4 p. m., October 20 temperature was 101.2 and pulse 100. A well-

defined mass was present in the right iliac fossa. The author saw the case at 9 p. m. and advised immediate operation, but to this the parents would not consent. The next day the abdominal pain had increased greatly in severity and was generalized over the abdomen. Simultaneously with the increase and generalization of the pain the tumor mass became much less clearly defined and diffuse tenderness developed.

Operation.—Performed 7:30 p. m., October 21. The usual incision was made through right rectus muscle, into the peritoneal cavity. On incising the peritoneum the pus welled out and was free in the peritoneal cavity; with no adhesions except immediately around the appendix. The peritoneum was intensely congested and covered in places with fibrinous exudate. The gloss was preserved except in certain areas, where the congestion was most intense. The appendix was gangrenous and perforated on one side into the free peritoneal cavity. A large fecal concretion was present. Appendix was amputated and stump buried. Two large drainage tubes were inserted—one into the pelvis and the other into the right iliac fossa. Abdomen was closed with separate layers. No sponging or irrigation used. Patient placed in bed in semi-sitting position at 37 degrees.

At 8 p. m. pulse was 152. Strychnia sulph. gr. 1/30 given and repeated every three hours. At 9 p. m. 10 c.c. anti-streptococcus serum given hypodermically, and this dose was repeated at 11 p. m. and 2:30 a. m. Inunctions of ung. Credé given at 9:30 p. m. and 2:30 a. m. At 10 p. m. temperature 103 (ax.), pulse 140, respirations 24. Up to this time had drank five glasses of water since coming out of anesthetic. Rested quietly during the night and vomited only once.

October 22, a. m., temperature 102.6, pulse 120, respirations 36. Dressings saturated with discharge from tube. At 10:20 a. m. high saline enema given and ordered repeated every two to three hours. Water given freely. P. m., temperature 102.6, pulse 120, respirations 34. Patient given small dose of saline cathartic at 2:15 p. m., which was followed at 4:30 by a slight bowel movement and again at 7:30 in the evening. No vomiting.

October 23, patient had good night. A. m., temperature 101.4, pulse 100, respirations 28. Had one good bowel movement and expelled a great deal of gas from the bowels, both spontaneously and after enemata; p. m., temperature 101.4, pulse 92, respirations 30; wound discharging freely.

October 24, a. m., temperature 101.4, pulse 88, respirations 30. Wound dressed and 1½ inch of upper drainage tube removed. The gauze drain, which was left in with the upper drainage tube, was loosened. P. m, temperature 101.4, pulse 84, respirations 26.

October 25, a. m., temperature 100, pulse 80. Wound dressed and a portion of the gauze drain removed. P. m., temperature 100.6, pulse 80.

From this date until October 31 temperature ranged between 100 and 101 in the afternoon, with pulse gradually lessening in frequency from 80 to 76. After October 31 it remained normal morning and evening. October 28 sutures and gauze packing were removed. November 4 drainage tube was entirely removed and discharge was very slight. Patient was kept in bed in the semi-sitting position until November 7, when he first sat up. After this date wound healed rapidly and he made an uninterrupted recovery.

CASE 5.—Mr. E. H., aged 19 years, occupation printer. Admitted to Mercy Hospital Oct. 25, 1902. Family and previous history negative.

Present Illness.—Began suddenly four days before admission with severe cramping pains in abdomen. Pain at first was more or less general and was followed after a few hours by nausea, vomiting and temperature of 102 F. After 24 hours the nausea and vomiting subsided, but the pain persisted and gradually localized in the right iliac region, where it remained for 72 hours. Temperature at this time was 101 to 102 F. At the end of third day the pain suddenly became more severe and spread over the entire abdomen. He had a chill, followed by profuse perspiration and the temperature rose to 103 F. When admitted to the hospital the next day, abdomen was moderately distended and extremely tender all over. Breathing was almost entirely costal and the abdominal muscles held so rigidly that deep palpation was impossible. On piano percussion there was dullness extending up almost to umbilicus. An absence of peristalsis existed all over the abdomen.

A diagnosis of perforative appendicitis with general peritonitis was made and patient at once prepared for operation.

Operation.—Ether anesthesia. The usual appendiceal incision made through the outer margin of the right rectus muscle, into the free peritoneal cavity, which was found to contain a large quantity of yellowish pus, possessing a slight odor. The appendix was gangrenous and perforated. A circumscribed abscess had ruptured into the peritoneal cavity. The intestines were everywhere bathed in pus, but though considerably congested, they still retained their endothelial covering. Appendix was removed. Perforated rubber drain, one-half inch in diameter, inserted into most dependent portion of pelvis, and also into right iliac fossa. The pus was not sponged out, nor was the abdomen flushed. Time of operation 20 minutes.

Patient returned to his room at 1:30 p. m. in fair condition, pulse 128. Placed in semi-sitting position at 35 degrees and kept there for six days. When he regained consciousness three pints of normal saline solution was given per rectum and was retained. Temperature at 5 p. m. was 100 (ax.). At 6:30 p. m. 10 c.c. anti-streptococcus serum was given hypodermically, and this was repeated at 9 p. m. and again at 12. A second enema of normal saline solution was given at 7 p. m. and retained. At 9 p. m. temperature was 101 (ax.), pulse 120 and respiration 34.

October 26, a. m., temperature was 101.8 and pulse 106; p. m., temperature 100.6, pulse 112. Water was given freely and most of it retained. He vomited only twice during the day and his bowels moved freely three times, after being started by an enema given in the morning. One quart of saline solution was given per rectum every four hours, and 20 minims nuclein hypodermically at the same intervals. Urine was passed freely.

October 27, patient complained of some pain across abdomen; wound was dressed and a large amount of sero-purulent discharge found on the dressing. A. m., temperature 100 and pulse 100; p. m., temperature 100.8, pulse 100. Inunctions of 40 grains ung. Credé ordered daily. Bowels moved freely and urine was abundant. Patient complained very little of pain in the abdomen and rested well.

October 28, a. m., temperature 99.8, pulse 88; p. m., temperature 100, pulse 86.

October 29, a. m., temperature 98.8; p. m., 99.4. Ung. Credé stopped and soft diet ordered.

October 31, wound dressed and very slight discharge found on dressing. Nuclein discontinued.

Highest temperature 99.4 in the afternoon.

Temperature reached normal November 2 and remained so until the 10th, when he developed a slight pleurisy, which caused an elevation to 100 for four days. It then again dropped to normal. Patient made an uninterrupted recovery, sat up December 2 and was discharged well December 10. Drainage tube was gradually shortened and reduced in size as the discharge lessened. It was removed altogether November 19

CASE 6.—Mr. F. McC. Admitted to Mercy Hospital Nov. 8, 1902. Family history negative. Personal history negative.

Present Illness.—About one month before onset of present trouble patient had a well-defined attack of appendicitis, lasting four days and from which he apparently completely recovered. He worked steadily from that time until onset of present attack. About 3 o'clock on the morning of November 8 patient was awakened by very severe, sharp pain in abdomen, about umbilical region. Soon after onset he became nauseated and vomited freely. Bowels did not move. He had no chill and temperature was not above 100 F. Symptoms continued until 8 o'clock a. m., when nausea and vomiting disappeared. He walked to the hospital, and was accompanied by his attending physician when admitted Pain was still severe and abdominal muscles rigid, especially on right side. Tenderness to pressure was general over abdomen, but not very acute. A

diagnosis of acute appendicitis without perforation was made and patient persuaded to have an immediate operation. He came in during a clinic and one-half hour afterward was on the operating table.

Operation.—Nov. 8, 1902. Usual appendiceal incision through outer border of right rectus muscle, into peritoneal cavity. To our great surprise, on incising the peritoneum, it was found full of free pus with some gas. Examination revealed a perforation of the appendix. The perforation had been capped with the omentum, but through some accident on the night preceding his admission the cap was partially torn from opening and the contents had escaped into the peritoneal cavity. The probe could be inserted into the lumen of the appendix; the peritoneum was not "blistered," and its gloss was not seriously disturbed. The lower half of the abdominal and pelvic cavities contained large quantities of pus. Appendix was amputated; two large drainage tubes were inserted into pelvis. With each inspiration pus welled out of the tubes.

Patient was returned to his room at 1:15 and placed in bed in semi-sitting position, at angle of 35 degrees. Pulse 104 when he recovered consciousness. He vomited small quantity of greenish fluid, was restless and complained of pain in wound. At 6 p. m. pulse was 78 and temperature 99.4. At this time he was given ½ gr. calomel and the dose was repeated at one-half hour intervals until 3 grains were given. At 6, 8 and 12 p. m. anti-streptococcus serum was given hypodermically in doses of 10 c.c. He slept some during the night, vomited once after taking 3ii mag. sulph., and at 4 a. m. was given a high rectal enema, which produced a free bowel movement. 300 c.c. of urine was passed.

November 9, a. m., temperature 99.4, pulse 92; p. m., temperature 100.6, pulse 108. Nuclein solution M. 20 was ordered every four hours, and inunctions of ung. Credé gr. 45, daily, Towards evening patient was restless and slightly delirious. November 10, a. m., temperature 98.8, pulse 88. Good bowel movement followed high enema. Still quite restless and slightly delirious at times. Complains of some pain. P. m., temperature 99.2, pulse 90. Calomel was given in divided doses, followed by mag. citrate, ℥i. Bowels moved twice. Wound was dressed and moderate amount of discharge found on dressing. November 11, a. m., temperature 99, pulse 76. Patient resting much more comfortably and bowels moved freely. P. m., temperature 100, pulse 84.

November 12, a. m., temperature 98.6, pulse 82; p. m., temperature 99, pulse 82. From this date until November 20 temperature ranged from 99 in the morning to 101 in the afternoon. On November 20 it reached normal in the afternoon and remained there until his discharge from the hospital. The drainage tubes were kept in for ten days, the tube being gradually shortened and diminished in size from time to time as the discharge lessened in amount. Dressings soaked in a saturated solution of sod. bicarb. were applied to the wound when the discharge was profuse to overcome the offensive odor, which persisted for six or eight days. Patient left the hospital December 6 cured.

This case illustrates forcibly what I have taught for years: That there is little or no depression immediately after perforation of the intestine and no collapse. In other words, collapse is a late manifestation and is the expression of the "blistering" of the peritoneum and absorption of the products of infection.

In this patient's case absorption did not have time to occur, as he was operated on ten hours after perforation took place. It will be noted that this patient was walking about the street with his physician, with his abdomen full of pus and a direct opening from his appendix into the free peritoneal cavity. Neither did I suspect the condition when I examined him before the operation.

No Medical Advertisements to the Laity.—A peculiar provision of Spanish law is that pharmacists are prohibited from advertising medicines or remedies in any papers but journals of medicine, surgery or pharmacy.

FUNCTIONAL TESTS OF HEARING: SOME OF THE PRINCIPLES ON WHICH THEY ARE BASED.*

WILLIAM LINCOLN BALLENGER, M.D.
CHICAGO.

The object of this paper is to call attention to the value of some of the functional tests of hearing and to the principles on which they are based. Wm. H. Thompson has recently made the significant statement that a knowledge of diseases of the ear is of more value to the general practitioner than that of all the other special senses put together. This being true, a knowledge of the more accurate methods of diagnosis and prognosis becomes a question of prime importance. The functional tests of hearing are of greatest value in that large and oftentimes perplexing group of diseases of the non-suppurative type which affect the middle ear and labyrinth.

No one doing ear work can claim to be abreast of the times if he does not have an intimate and comprehensive knowledge of the principles underlying these tests. They are to the otologist what the ophthalmoscope is to the oculist, or the stethoscope is to the one skilled in diseases of the chest.

It has been a source of some surprise to me to hear otologists of good repute refer to the functional tests of hearing as being of very limited value for diagnostic purposes. I may be pardoned, therefore, for making the following remarks on this subject:

In order to place it more clearly before us for discussion I will first state the principles on which the tests are based.

First Major Principle.—The range of hearing in adults under 55 years of age is approximately 16 to 48,000 vibrations per second. After the fiftieth or fifty-fifth year the hearing for the upper tones is somewhat reduced, as has been shown by Zwardemaker, Bezold and others. The very aged do not, as a rule, hear tones higher than 37,000 vibrations per second. This should be borne in mind, as the case might otherwise be mistaken for one with labyrinthine deafness.

Under the first major principle may be grouped two secondary principles which only serve the purpose of elaborating or elucidating it. They are as follows:

(*a*) Anything which disturbs the normal tension of the drumhead and ossicular chain will diminish or abolish the hearing for the two or three lower octaves.

(*b*) Any disease affecting the perception apparatus will diminish or abolish the hearing for the upper tones of the range of hearing.

Second Major Principle.—Hearing by bone conduction is approximately one-half as long as hearing by air conduction.

This rule is subject to considerable variation in normal ears, but for practical purposes in the study of these principles we do not need to make a closer analysis. The point to be borne in mind is that hearing by air conduction is longer than by bone conduction.

The second major principle may be still further elaborated or elucidated by two secondary principles, namely:

(*c*) Hearing by bone conduction is increased in those affections of the middle ear which disturb the normal tension existing between the drumhead and ossicular chain.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. Emil Mayer, C. R. Holmes and G. H. Makuen.

(*d*) Hearing by bone conduction is diminished or abolished in affections of the labyrinth or perception apparatus.

Third Major Principle.—The intensity of hearing by bone conduction is either increased or diminished by morbid conditions within the middle ear or labyrinth. Two secondary principles may be given in this connection, namely:

(*e*) Any disturbance of the normal tension existing between the drumhead and ossicular chain will increase the intensity of hearing by bone conduction.

(*f*) Any disturbance of the perception apparatus will diminish the intensity of hearing by bone conduction.

With these principles in mind we are prepared to discuss their application to the purposes of diagnosis and prognosis.

After having made a careful history of the case, including all subjective and objective phenomena, it has been my custom in both clinical and private practice to test the range of hearing with tuning forks for the lower seven octaves, and with the Galton whistle for the remaining or higher limit of hearing. Note should be made as to whether the lower or higher tones are not heard. According to the secondary principles, *a,* if the lower tones are not heard middle ear or tubal disease is probably present. If the upper tones are not heard it is presumptive evidence of labyrinthine disease, as is shown in secondary principle *b*. Hence, the examination as to the range of hearing is of great value in determining whether the deafness is due to middle ear or to labyrinthine involvement. Thus, if a given case does not hear forks below, say 256 vibrations per second, we would be justified in assuming it to be one of middle ear disease; whereas, if the upper tones of the Galton whistle are not heard it is fair to assume that the labyrinth is involved.

There are exceptions to these conclusions, one being in those cases well advanced in years, when the upper tone limit is normally reduced; another is when there is marked retraction of the drumhead, forcing the footplate well into the oval window. The tension of the intralabyrinthine fluid is thereby increased, and may give the usual functional signs of true labyrinthine disease. The signs will quickly disappear, however, on inflation of the tympanic cavity, and thus clear the diagnosis.

As shown in the second major principle, hearing by bone conduction is approximately one-half as long as it is by air conduction. If, in a given case, bone conduction in the affected ear is relatively longer than hearing by air conduction, the disease is probably within the middle ear. If the Weber test is performed the sound will latteralize to the affected side; or if the Rinné test is made the result will be negative Rinné, i. e., hearing by bone conduction will be longer than by air conduction.

If, on the other hand, bone conduction in the affected side is relatively diminished in duration, it is probably one of labyrinthine involvement. The Weber tests will latteralize to the good or better ear rather than to the more affected side, while the Rinné and Schwaback tests will show a relatively diminished hearing by bone conduction on the affected side. In pronounced cases the hearing by bone conduction is entirely lost in the affected ear.

It is apparent, therefore, that a knowledge of the foregoing principles will render the functional tests of the organ of hearing comparatively easy to comprehend. It is easier to comprehend principles than it is to comprehend tests without a knowledge of the principles on which they are based. It is, therefore, well to group the tests under the principles which they elucidate. Thus, under the first major principle we may place the test for the range of hearing by the tuning fork and Galton whistle, making note as to whether the lower tones (subprinciple *a*) or the higher tones (subprinciple *b*) are lost.

Under the second major principle we may place the Weber, Schwaback and Rinné tests, as they show the relative duration of hearing by bone and air conduction.

Under the third major principle we may also place the Weber test, as it shows the relative intensity of hearing by bone conduction in the two ears.

And so we may classify all the functional tests of the ear under the various principles which they elucidate. Much confusion arises from a failure to comprehend the principles on which they are based, each test being used as an arbitrary or empyric method of determining the nature and location of the lesion causing the deafness. A better and simpler way to approach this subject is to first study the principles on which the tests are based and then group them according to the principle or principles they are supposed to explain. In this way the various tests and their individual and collective significance will afford a means of greater discrimination in the diagnosis and prognosis of many ear diseases which would otherwise be but partially understood.

There is not time within the limits of this paper to enter into a discussion of the relative merits or significance of the various tests. I wish to say, however, that it is rarely safe to draw conclusions from any single functional test. The composite of several tests, together with the history and clinical phenomena, should all be considered in making the diagnosis.

DISCUSSION.

DR. A. H. ANDREWS, Chicago—I think this is a good time to mention the importance of the entire subject of otology. I think that in most of the medical colleges of the United States it is a sadly neglected subject. I will say, further, that it does not seem to be the fault of otologists, but rather the fault of those who have the arranging of the curriculum of the various colleges that it is not given greater prominence. Medical students need not be specialists, but they ought to know enough to do something with diseased ears. The Doctor states that the relation between air conduction and bone conduction is approximately as 1:2. That is no doubt approximately true, but it makes a great difference on what part of the mastoid the handle of the tuning fork is placed. If it is placed immediately behind the auricle the patient will hear it much longer than if it is placed above or below. If the handle is pressed tightly against the mastoid he will hear it considably longer than if it is pressed lightly. All these things should be borne in mind in testing bone conduction. Another point is the importance of testing in the first examination both before and after inflation of the tympanic cavity. Sometimes the relation between air conduction and bone conduction will be reversed after inflation. In very many cases it will be materially modified. Not only is this important from the standpoint of functional examinations, but it is very important in making a prognosis. Further, in making tests of bone conduction we will sometimes find that one fork is not heard as well by bone conduction as another fork. I have often seen cases where the C 2, 512 vibrations was not heard as long as a higher fork or a lower fork. I mention the C 2 fork because that is the one most frequently used in testing bone conduction. I have never seen a case of labyrinthine disease in which the intensity of bone conduction was increased. In testing ears with tuning forks we should bear in mind the necessity of having accurate forks and forks that are free from overtones. A fork with overtones will often give very different results from a fork free from overtones. Hold the fork by the handle and strike with a pencil on about the middle of the

prong, and if it gives a ring it has overtones and is not desirable; but if it gives a dead sound, you will then probably get a pure, clear tone and the fork is of value in making these tests.

DR. G. MCAULIFFE, New York City—In dealing with cases of neurasthenia or allied conditions of nerve exhaustion, we should not hold the tuning fork too long in front of the ear. After resting the nerve if we will again approach the ear they will again appreciate the sound. If we do not do this we would get a shortened perception. Another point, in trying the Weber test—which I find the most unreliable one—is to place the fork underneath the mastoid, at the beginning of the sternomastoid. I have been able to get the proper response to the Weber test by this procedure.

DR. S. VOORHEES, Elmira, N. Y.—I would like to ask the Doctor if he does not find, for instance in labyrinthine disease, the higher tones are lost and the lower tones only recognized.

DR. B. A. RANDALL, Philadelphia—I think it is extremely important to get forks that are somewhere near what they purport to be. On testing on the kymographion the various forks furnished you will get some very peculiar results. It is very seldom that they will give the rapidity of vibration set down for them. Second, the value of the fork should be expressed in the frequency of the vibration and not by a symbol, which is so varying in its employment that the term "C fork" may represent at least three different octaves. It is better to employ the complete double vibration instead of the half vibration, as is done by most continental workers. Third, the blow struck should have some semblance to standardization, and in the tuning forks we should have some idea of the bulk of metal vibrating. Not too much of the metal should be in the handle, which should be long in high tuning forks, lest the fork be really heard largely through the air when resting on the head. If we are stating that a fork of, say, 213 1/3 d.v.s., is heard after a standard blow for so many seconds, let us have a standard that it has fallen its own height, that it is of such a length and such a weight. Then when men having different sized forks get different results we will have some clew as to why their results appear different when they are really the same. These things are extremely important; they are really fundamental to any understanding of the matter.

DR. WILLIAM L. BALLENGER, Chicago—In reply to Dr. Voorhees, as a general proposition there will be a loss of hearing for higher tones. The paper I left at home is a discussion of just such subjects as have been brought up in the discussion. It gives the technic of observation and testing and is intended as an answer to such objections. This paper only deals with the general principles.

THE TREATMENT OF TRAUMATIC GANGRENE OF THE EXTREMITIES.*

VAN BUREN KNOTT, M.D.
SIOUX CITY, IOWA.

In this brief paper it is my aim simply to call attention to a procedure which, in my experience, has proven of great utility in the management of these very troublesome and too often fatal cases. I shall not take up the pathology of traumatic gangrene, for with that you are all familiar, but shall confine myself to its treatment.

On referring to the literature we find all authorities agree that the only treatment of this class of cases consists in early amputation above the gangrenous area.

How often are we able to determine accurately the limits of the disease, particularly in those cases of rapidly spreading moist gangrene? Too often we are disappointed by the continuation of the process after amputation, and are compelled to reamputate much higher, in spite of which the patient often dies.

Again, if the gangrenous process does not involve the entire limb the flaps frequently slough, necessitating another operation and the sacrifice of what is too often most valuable tissue so far as the future usefulness of the part is concerned.

In other cases I have been convinced by subsequent events that in my effort to get well above the disease I have sacrificed tissue which might have been saved. In other words, I have amputated at a higher point than necessary. The occurrence of any of these conditions neither contributes to the welfare of the patient nor to the peace of mind of the surgeon, and we are all anxious to avoid them as completely as possible.

In casting about for the probable cause of the unsatisfactory course pursued by many of these cases I became convinced that it was the attempt to form flaps from tissue the vitality of which is always seriously in question and the further impairment of that vitality by two procedures necessary to this method of operation. First, the dissection of the flaps; second, the introduction of sutures.

The dissection of the soft parts into suitable flaps necessarily interferes with its blood supply, which interference in the class of cases under consideration is often illy born and frequently resented by sloughing of the flaps or the rapid extension of the gangrenous process up the limb. The introduction of sutures at this time has two distinct disadvantages. The first is the retention within the wound of infectious elements which may have traveled up between the muscle planes or along tendon sheaths to a higher point than we believe probable.

The second is the further interference with the flap nutrition by the suture tension which, no matter how carefully they may be placed, can not entirely be avoided. Believing the statements above made to be true, and that the bearing of these facts on the results secured in these cases was most important, I began about two years ago to treat all cases of traumatic gangrene of the extremities by a method which was entirely original and of which I have been able to find no mention in the medical literature at my disposal.

The procedure is as follows: Being confronted with a case of traumatic gangrene of an extremity, estimate as exactly as possible the line between the diseased and healthy soft parts, and having first under anesthesia made a most careful and complete disinfection and cleansing of the skin, puncturing all bullæ and removing all discharges, envelop the gangrenous area in a sterile towel up to the line selected and at this point make a circular amputation, cutting through soft tissues and bone at the same level. Ligate carefully all bleeding points, including none of the perivascular tissue in the bite of either the forceps or the ligature.

Leave the wound absolutely open, not introducing a single suture, and apply moist dressings of gauze saturated with salt solution. The dressings to be changed two to four times in twenty-four hours, as the circumstances of the particular case demand.

After seven to ten days, if the wound is perfectly clean and the condition of the patient favorable, the classical circular amputation may be made by dissecting up the flap already outlined and sawing the bone at the proper level. If for any reason the circular method may seem undesirable, any other procedure may be substituted, but in the class of cases under discussion a typical circular amputation will be found entirely satisfactory.

I will not burden you with a report of cases, but will simply state that I have employed this procedure four times, once in the upper third of the thigh, once in the middle third of the forearm and twice in the upper third of the leg with uniformly good results.

* Read before the Iowa Association of Railroad Surgeons, Oct. 16, 1902.

CONCLUSIONS.

As my results by the old method can not be compared with these I have ventured to bring the procedure forward for consideration. Its advantages seem to me to be many and its disadvantages few.

1. By it we may speedily and with the minimum of shock remove from an enfeebled and exhausted patient the source of the infection, namely, the gangrenous tissue.

2. We may frequently make the amputation at a lower point than would be possible by the old method, because soft tissues whose vascular connections are left undisturbed are less apt to slough.

3. The freest possible drainage is provided for a sufficiently long time.

4. If the disease stops at the line first chosen no unnecessary sacrifice of tissue has been made, as the flaps have been defined at the lowest limit of safety and the bone would necessarily have to be sawn at the same point as at the second operation.

5. If the limits of the disease have not been placed sufficiently high the same procedure may be repeated with less danger to the patient than a typical reamputation.

6. Patients too weak and prostrated by sepsis to withstand a typical amputation may endure this much shorter procedure and be built up during the interval before the second operation is necessary.

I hope that use will be made of this method in the future management of these cases that its value may be more fully and satisfactorily proven or disproven.

POISONED WOUNDS BY THE IMPLEMENTS OF WARFARE.*

LOUIS A. LA GARDE, M.D.
MAJOR AND SURGEON, U. S. ARMY.

Mr. President and Fellows of the College of Physicians: In the first place allow me to thank you for permitting me to address the honorable College of Physicians in the capacity of Mütter lecturer. In looking over the names of the distinguished men who have preceded me in this function, I admit that your invitation was accepted with a great deal of hesitancy. I accepted the charge because of a sense of duty to my department, and because it has been my good fortune to serve in most of the principal seats of learning in this country, and my observations have led me to the conclusion that there is a deep bond of fellowship between the military surgeon and his brethren in civil life that is largely cemented by a mutual love of all that is lofty and inspiring in the healing art. Your opportunities to set the pace as we advance in scientific medicine are superior, and your liberality in imparting great truths as we come to drink anew at the fountain of knowledge are well remembered. In return for the kind attention which you are wont to bestow on us when we resort among you, I beg of you to accept this effort as a mark of the gratitude which the military surgeon owes his civil confrère.

In discussing poisoned wounds by the implements of warfare it will appear difficult to separate them from infected wounds by these implements, and justly so. The terms are considered interchangeable in this instance so far as they relate to the transmission of micro-organisms, and it was considered expedient to retain the former term in order to conform to the old idea of poisoned wounds from poisoned arrows, lances, etc.

I. HISTORICAL.

The poisonous nature of wounds by the implements of warfare—especially those from firearms—has been dwelt on by the majority of the older writers. Frequent reference is made to the subject by John de Vigo, and Ambroise Paré was so imbued with the venomous nature of such wounds by reason of the powder, that he was wont to "cauterize them with oil of elders scalding hot, mixed with a little treacle." His trepidations in one instance when his boiling oil mixture ran out are graphically told by his biographer. In the absence of anything more efficacious he was driven to the use of yolk of eggs, oil of roses and turpentine in the treatment of the remainder of the wounded. After a sleepless night spent in anxiety for those who had not been given the conventional treatment of the day, by hot burning oil, he found, to his astonishment, that they had suffered but little pain, and their wounds were without inflammation and swelling, having rested fairly well the night before; the others, on whom the boiling oil was used, were feverish, with great pain and swelling about the edges of their wounds. Thus disinfection by heat as he practiced it gave results rather confusing and conflicting.

On the other hand, Thomas Gale, in his treatise of wounds by gunshot, attempts to refute the erroneous notion of Ambroise Paré, Jerome Brunswicke, John de Vigo, Alfonse Terrius and others concerning the venomous nature of gunshot wounds.

It is seen, therefore, that, from the beginning, the belief in the septicity or asepticity of gunshot wounds was indulged in. As to the value of the heat of ignition, if any, to purify the missiles as they issue from firearms, we will speak later.

Poisoned wounds from the use of so-called sidearms, or more properly speaking, cutting and stabbing implements, like the spear, sword, arrow-heads, knives, javelins, etc., have a very interesting literature, dating back to the days of the Greeks and Romans. A practice that is abhorred to-day and classed among the most cowardly deeds in the list of crimes, seems to have been pretty generally adopted in ancient times. For a complete account of the use of poisoned arrows, including an outline of the toxicology of the substances employed for the purpose by the ancient peoples of Europe, we are indebted to Gustav Lagneau. He points out that specimens of arrows gathered from the later paleolithic periods give proof that the art of poisoning arrows was known to the inhabitants of prehistoric times. Arrows made of bone to serve the points of javelins, lances, etc., are to be found in numerous archeological collections, and they suggest by the method of preparation that they were designed to carry poisons. Their surfaces show furrows and grooves, disposed parallel to the sides; grooves are also found on the teeth or serrated margins, for the reception of the poisonous matter, similar to what we find on the arrows of more modern periods.

The literature of historic times gives ample evidence of the use of poisoned arrows against man and beast. Thus Aristotle relates that the Celts in the hunt used poison on their arrows which was called *toxic.* After wounding a deer, for instance, it was considered necessary to excise the seat of injury at once, in order to insure the safety of the meat as food and to prevent rapid decomposition. The Gauls, according to Pliny, dipped their arrows for the hunt in hellebore, which had the

* The Mütter Lecture, delivered at the College of Physicians of Philadelphia, Dec. 2, 1902.

effect to make the meat more tender after excision of the wound area. These same people used an herb called *limeum*, which was known among them as deer poison.

Lagneau again cites numerous references to show that the Francs of the Rhine district and beyond used arrows dipped in the juices of numerous herbs that were so deadly that death was sure to ensue though the wound was trifling and in non-vital parts. The practice of using poisoned arrows in war became so frequent among the Francs that a law was inserted in their code in the fifth century to prohibit their use; the penalty on conviction being a fine of sixty-two and a half sous, or about sixty cents in our money. The same proscription was embodied in the Bavarian law later, although the penalty was not so great—the fine being a maximum of twelve sous. The Vandals, who originally inhabited North Germany, used poisons on their war implements, knives, lances, javelins. Pliny considered aconite the most deadly among the poisons so employed. The Europeans must have continued the practice of poisoning the implements of warfare to a late day, because M. Claude Bernard is said to have observed that Alonzo Martinez Espinoz, Porte-Arquebuse to Philippe III, admitted that a poison was manufactured by the Spaniards at that time from the root of the hellebore with which their implements were treated. Without extending the subject further it may be admitted from the copious references at hand that the peoples of Europe, generally speaking, engaged in the practice of poisoning the implements used in the hunt and in war. The practice is even known to have extended to the Scythians and the people of the far East.

The number and nature of the various poisons thus used on missiles and weapons like arrows, darts, javelins, swords, lances, battle-axes, etc., are commented on by Lagneau quite extensively. Of the vegetable poisons most commonly employed were extracts of hellebore, aconite, yew, limeum, ninum, helenium and that of a certain fig tree. The poisonous nature of the former of these is recognized to this day, since we extract from them the powerful alkaloids, like veratrin, aconitin and taxin; while the nature of the latter, namely, limeum, ninum, helenium and the fig tree mentioned are unknown to us now. Some of these poisons were said, like curare, to cause death when introduced through a wound, while they remained innocuous when ingested *per os*.

The poison materials were not confined to vegetable products alone. Ovid, who lived in exile about the Propontis, in the ninth century of our era, wrote on the custom of the nations of Eastern Europe, who, like the Scythians, poisoned their war missiles with venom of the viper, as well as the bile and blood of this reptile.

If we pursue the subject to more recent times we find that definite methods of poisoning missiles in warfare and for the hunt abide to this day with certain aboriginal peoples on the west coast of Africa, the South Seas, India, Indo-China, etc. Blood, decomposing viscera, snake venom and plant extracts are the substances usually employed. Siegfried in a general way tells us that "in Oceanica and the East Indies the plants employed are cardiac depressants; in the New Hebrides and some of the South Sea Islands the poison is like strychnin in its effects; in Africa various poisons are employed, including anthrax; and in the tropical waterways of the Amazon and Orinoco, curare and similar plant extracts." Ledantec, whose personal experiences had led him to suspect the poisonous nature of the arrows used by the latter, conducted some interesting experiments in the laboratory at Nouméa, New Caledonia and at Bordeaux, the results of which confirm in a measure the presence and nature of certain poisons. The arrows of the natives of the New Hebrides are propelled from a bow. They are about three feet in length, composed of a shaft made of light material like reed cane, a middle part composed of a hard wood, with a sharp point fixed on the end of the latter. The point is made of a piece of human bone, usually from a long round hard bone like the ulna or fibula, brought to a sharp, slender point to invite fracture and lodgment of part of the missile on penetrating the tissues. These osseous points are coated with a dark substance resembling wet powder grains when they have been allowed to dry in mass. These powder-like bodies constitute the poison. In the Nouméa laboratory he used guinea-pigs. Under strict antiseptic precautions he inoculated the poison from old arrows previously moistened with bouillon, under the skin of the back and abdomen. His results were only partially successful; that is, he obtained the clinical picture of tetanus in some cases, such as contraction or extension of the posterior extremity, contraction of the muscles of the dorsal region, opisthotonos, etc. His later experiments at Bordeaux with the poison from fresh arrows, prepared only six months before, were attended with more definite results. A guinea-pig inoculated with the poison from the recently prepared arrows died very promptly, within twenty-four hours. The postmortem evidence, microscopic examinations of cultures taken from the blood of the heart, and subsequent inoculations into animals confirmed the presence of malignant edema. From this partial examination of the poison he concludes that: first, the bacillus of Nicolaier resides indefinitely in the arrow poison, because the clinical picture of tetanus was so clearly shown in the animal inoculated with the poison from the old arrows; and second, that the poison of the recently prepared arrows contains malignant edema in addition to tetanus, a supposition that is reasonable enough from his inoculation experiments as well as from our knowledge of the ready susceptibility of malignant edema to moisture.

The source of the poison is of itself interesting. From a native of the New Hebrides who resided at Nouméa the following method of preparing the arrows was learned: With a stone an incision is made in the bark of a tree called Dot. A milky fluid escapes, with which the arrow points are coated. This fluid, of rather thick consistency, serves the purpose of fixing the poison proper. The point of the arrow is now wrapped with thread, leaving a space between each round. The arrow thus prepared is dipped into the mud of crab-holes; after drying the thread is unwound, when the weapon is ready for use. It is supposed that the thread is removed to give the point a rough surface and to increase the area from which poison is absorbed.

The French have had occasion to observe the subject of poisoned arrow wounds a great deal in their Chinese possessions. Boinet and Hedón describe the arrows used by the Muongs in Tonkin, China, as made of bambco 40 cm. in length, half a cm. in diameter and weighing six grams. Their points are coated with a brownish poison soluble in water; the solution resembles that of curare. On each arrow it is possible to recover 50 cg. of the poison. They experimented altogether on twenty animals, and sum up their work as follows: Three drops of a solution of 50 cg. of the poison to 10 grams of water deposited on the heart of a frog stops its beat

in seven minutes, and a centigram of the same solution subcutaneously administered is sufficient to kill a guinea-pig. Examination of the poison shows it to be made from the leaves of the *Antiaris toxicaria* or *Upas antiar*, the Javanese poison tree, a cardiac depressant.

The English have referred a great deal to the subject of poisoned arrows in their Indian service. Waddell, while professor of chemistry at Calcutta, examined the arrows prepared by the Akos, who occupy the Assam valley to the north of the Bramaputra. They use their poisoned arrows for large game and most effectively in warfare, as was shown on the Sepoys who operated against them some years ago. The physiologic effects of the poison on the arrows were those of aconite and the roots from which the poison was obtained belonged to a species of aconitum.

According to the researches of Gley and Lapique, strophanthus is one of the poisons used by some tribes in the center of Africa. An injection of one or two milligrams under the skin of a frog of the crude substance obtained from arrows and reduced to an aqueous extract, or two or three centigrams under the skin of a rabbit or dog, arrested the heart in systole in six to seven minutes. Analysis of the poison showed it to be *Strophanthus hispidus*.

Fraser and Tillie, who have studied the chemical properties and pharmaceutical action of the wood from which arrow poison is prepared by the Wa Nyika and other tribes of east equatorial Africa, confirm the presence of strophanthin as the poisonous agent on the arrows of these people. On frogs the prominent effects which follow the subcutaneous injection of large lethal doses are: slowing and intermittence of respiration, gaping of the mouth, often accompanied with straining movements like those of vomiting; fibrillary twitchings of muscles, especially at the seat of injection; impairment of motor power and of co-ordination; disappearance of cardiac impact; cessation of respiration and gradual enfeeblement and loss of reflex and voluntary movements.

In specimens of arrow poison furnished Tillie from the Rio Verde tribe of Indians in New Granada he was able to extract curare as the basis of the active poison. This, as already stated, is the favorite poison used by the tribes in the South American districts bordering on the Amazon and Orinoco.

Gärtner has recently called attention to a heart depressant used as an arrow poison by the Negritos of the Island of Luzon of the Philippine group. The poison is obtained from the bark of a tree called abuhab by the natives, the scientific name of which is *Raboloisia philippinensis*, the botanic description of which is minutely detailed by the author. He was able to obtain an extract from the bark of great potency, 0.1 gram inserted under the skin of a frog arrested the heart action in eight minutes.

The methods pursued by the North American Indians are more varied and for the most part not so deadly. Hoffman tells us that the Comanches employed the juice of the Spanish bayonet (*Yucca augustifolia*), which they obtained by piercing the skin of the plant with the arrow points. The ceremony of thus preparing the arrows is directed by the war chief after a period of fasting and self-torture by the young warriors. The Lipans are said to plunge the points of their arrows in the menstrual blood of a woman, while the Apaches prepare their poison by grinding the heads of rattlesnakes with fragments of deer liver. After decomposition has been allowed to take place the arrow-heads are dipped in the mass and subsequently set aside to dry. The Moqui Indians of Arizona prepare a poison that is said to cause death in the course of three days, which they call Ti-ki-le-li-oui. It is prepared as follows: A rattlesnake is irritated to the point of madness, when it inflicts stings in its own body, from which blood begins to flow. At this juncture of the religious ceremony the high priest of the order of snakes dips the arrow points in the sanguineous fluid. The less deadly methods of preparing arrows by the same tribe is that of dipping them in a mixture of the bodies of bees or red ants ground in a stone mortar. The wounded from a missile thus prepared are said to suffer from pain and swelling about the pharynx and in the part hit, and subsequently with fever and delirium. Invalidism is said to persist for about one month.

II. THE COMPOSITION AND MANUFACTURE OF AMMUNITION WITH REFERENCE TO THE PRESENCE OF INFECTION.

The practice of poisoning missiles after the introduction of firearms became less frequent. The superior deadliness of these weapons over those of the sidearm class rendered the employment of accessory methods, like the use of poisons to ensure death, unnecessary.

In view of the amount of heat which is generated with the ignition of explosives, the possibility of poisoning bullets for the purpose of conveying infection has often been debated. In considering the septicity or non-septicity of projectiles, it may be stated, that until the formulation of our bacteriologic technic, as now practiced, it was impossible to accurately determine the pro or con of this interesting question. Those who in former times advocated the asepticity of projectiles did so on the evidence afforded by their uniformly good results in the clinical field; whilst those who opposed the idea did so on the evidence furnished by unfavorable results from the same quarter.

As a preliminary to some observations on the bacteriology of ammunition, it is proper to carefully investigate the method of manufacture of the different articles entering into the composition of ammunition, such as the explosives and the wadding, as well as the shells, and also the technic of loading. In this way only can we determine whether the methods employed are calculated to purify or contaminate the missiles that are concerned in the production of gunshot wounds.

Black Powder.—We are informed by prominent makers of powder in this country, notably the E. I. Dupont de Nemours & Co. of Wilmington, Del., that the purity of powder is assured by the high degree of heat to which the three ingredients of the powder are subjected before being incorporated in the form of an explosive compound. These ingredients, as is well known, are: saltpeter 15 per cent., sulphur 10 per cent. and charcoal 75 per cent. In refining saltpeter the saturated solution of the crude material is heated to a temperature of 250° F.; the sulphur is fused from the crude brimstone, in order to remove extraneous matter; and the charcoal is obtained from willow wood after being subjected to a high temperature in a retort.

Smokeless Powder.—The so-called smokeless powders are for the most part secret compounds divided into two principal classes, viz., those made up of guncotton and the others having picric acid as a base. The former of these are used almost exclusively in the military rifle. The Schultze Gunpowder Co. informs us that their

"E.C." powder has for its base guncotton of various nitrations, which, as is generally known, consists of treating cotton with a mixture of strong sulphuric and nitric acids. The guncotton so obtained is next thoroughly purified by washing with boiling water, the temperature being never less than 212° F. As to the subsequent processes only the purest of salts, such as nitrate of barium and potash, are used to be incorporated with the guncotton. The grain is next gelatinized with solvents, like alcohol, ether and acetone.

It would be trespassing beyond the limits of this lecture to detail the mode of manufacture of the many smokeless powders found in the market, but it is sufficient to state that the extra care undertaken to exclude impurities is calculated to render the powders sterile, as they issue from the factory at least.

Wads.—According to the Union Metallic Co., cardboard wads are manufactured from newspapers soaked in hot water, and when reduced to a pulp the material is run through a refining engine. It is then treated by machinery to convert it into a web of desired thickness. When taken from the machine the sheets are dried and finished with a hot roller. Wad-felt, another material used for wads, is, according to other manufacturers, made from wool, hair, soap, flour, glue and china clay. White paper is pasted on both sides of the felt. This wadding material is next subjected to hydraulic pressure, then dried and cut in strips, after which the strips are run through a cutting machine. The final step in the process consists in lubricating the edges of the wads with stearin heated at 130° F. As far as can be learned there is nothing in the process of manufacture to insure wadding material from contamination.

The Manufacture of Metallic Shells and the Process of Loading.—Ordnance Memoranda, No. 8, of the U. S. Army, describes the following method of manufacture of the center-fire metallic cartridge, which is about the same as that employed by private firms. Although there have been some improvements in the process of manufacture since the circular was issued, the employment of heat and the use of acids and alkalies remain about the same.

The cartridge consists of the following parts: (1) The case of copper or brass, (2) the cup anvil, (3) half a grain of percussion composition, (4) 70 grains of musket powder, (5) a lubricated bullet weighing 500 grains.

During the manufacture of the copper cases they are annealed once or twice by subjecting them to a red heat in a charcoal fire. They are subsequently treated once with a solution of sulphuric acid in water (1 to 15), and twice finally with a solution of caustic potash and caustic soda, one and a half pounds of each to five gallons of water, after which they are thoroughly dried in a drying room at a temperature of 125° F.

The lead of which the bullets are made is melted and skimmed of dross, after which it is cast in cylindrical molds of suitable diameter and length. The subsequent steps of compressing the lead and cutting the bullets into proper length is done entirely by machinery.

The act of loading is also accomplished by machinery, and before each bullet is pressed into its copper case its surface and cannelures are lubricated by a mixture of grease and wax which has been previously subjected to a high temperature.

The Union Metallic Cartridge Co. describe the method of loading metallic and paper shells as follows:

The shells, after being primed with fulminate of mercury, are placed in plates holding them securely and filled with powder; over these plates of charged shells another set of plates holding bullets or wads, as the case may be, is placed in perfect alignment with the shells beneath. By means of a pin-plate wads or bullets are forced in place, after which the shells are crimped. The paper shells are placed on a rotating dial, which deposits them singly in a receiving chamber, where by an intermittent action of the machine they are loaded with powder, wads and shot.

The cartridges are finally packed and hermetically sealed into paper boxes, the frames and skeleton divisions of which are made of tarred boards. The employment of heat, acids, alkalies and absolute cleanliness are said to be necessary by the manufacturers of ammunition to insure the keeping qualities of the powder and to obtain constant results in firing, precautions which doubtless add to the sterile properties of the cartridges.

Having in this way investigated the origin and preparation of ammunition, it was next considered proper to study its bacteriology.

III. THE RESULT OF BACTERIOLOGIC INVESTIGATION AS FAR AS IT RELATES TO BULLETS, GUNPOWDERS AND WADS, BEFORE AND AFTER FIRING.

1. *Bullets.*—In a bacteriologic study of bullets from original packages we found that the cleanly methods employed in the manufacture of ammunition tend to sterilize the projectile in a majority of cases. A score of bullets were extracted from brass shells by means of sterile forceps and dropped in as many tubes of gelatin. After the lapse of a few days 53 per cent. of the tubes failed to show any growth, and those containing colonies were found free from septic germs.

In order to ascertain the effect of firing on the bacteria that might be found lodged on a contaminated bullet, a six-chambered 38 caliber Colt's revolver was sterilized for one hour in an Arnold's sterilizer before firing. At a range of 13 feet 12 cartridges that were lying on the floor of an unswept room were fired from the sterile pistol into an iron target enveloped in a wire screen, the target and the screen having been previously sterilized by the flame. As each shot was fired the target was sterilized anew. The projectiles and fragments of the same were collected as rapidly as they were fired, from the sterile screen, and dropped in agar-agar tubes at 42° C., and converted into Esmarch rolls. At the end of 48 hours, at the ordinary room temperature, all the tubes showed growth and the majority of them contained scores of colonies.

2. *Black Gunpowder.*—(*a*) The components of black gunpowder (sulphur, saltpeter and charcoal) obtained from the Dupont Powder Works, Wilmington, Del., were separately examined by placing a few grains of each in a half dozen bouillon tubes. Under favorable conditions of temperature growth only occurred in those containing charcoal. This was undoubtedly the result of contamination in handling, as the charcoal was obtained loose, wrapped in a piece of newspaper. Otherwise, as already intimated, charcoal is sterile from the high degree of heat to which the willow wood is subjected in the retort. The antiseptic property of the other components accounts for the negative results with them, no doubt. The saltpeter was the subject of special study, because the crude material is obtained from saltpeter beds in the earth where every opportunity might exist for the introduction of tetanus and other impurities. Still, as already noted, the refining process employs such an amount of heat, 250° F., as must preclude the persistence of the most resistant spore-forming bacteria, so that the heat and antiseptic value of the chemical product together most likely account for the absence of growth in the bouillon tubes belonging to this series.

(*b*) We next examined the powder charge of blank cartridges from three different makers, viz.: the Domin-

ion Cartridge Company, the Eagle Metallic Cartridge Company and the Union Metallic Cartridge Company. Every precaution was observed to prevent contamination during the operation of unloading the shells. The latter were immersed in a 1/1000 solution of mercury bichlorid for sixty minutes before the wadding, which was non-absorbent, was removed with a sterile pin. The full charge of powder was added to a tube of bouillon, and altogether 41 tubes were thus prepared from the different ammunitions. Placed in the incubator at 37° C. aërobically and anaërobically at the end of 24 hours 12 per cent. of the tubes showed growth. The contaminated tubes might have been the result of accident in the technic, but more probably some of the cartridges were normally contaminated in the process of loading. Although powders are generally found pure for the most part, yet some samples are often very trashy, as those used in the manufacture of firecrackers. Tests made with the latter show that contamination is present in 76.6 per cent.

(*c*) To determine the value of powder as a disinfectant, we dropped 12 grains of sterile powder in each of twelve tubes, and having found no growth at the end of 24 hours under favorable conditions of temperature, we inoculated each tube with a culture of colon bacillus. The growth of the latter was not interrupted, showing that black gunpowder *per se* does not destroy or restrain the growth of this organism.

(*d*) The next step in our experiments had reference to the potency of the heat generated in the chamber of a gun to sterilize the unburned grains of powder at the moment of ignition. It is of interest to know in this connection that in firing an ordinary hand rifle only 43 per cent. of the amount of powder is consumed in the generation of the gases. The remaining 57 per cent. of the charge is propelled at distances varying with the amount of the charge, the standard of the powder and the caliber and length of the barrel. The grains of powder that are imbedded in the tissues to produce what we generally designate as powder-burn are not consumed in the act of firing. This is well shown by firing into blotting paper and collecting the grains that are caught in the latter. When placed in a saucer they are easily ignited by a burning taper. It was natural at this point that we should inquire into the fate of organisms that might be accidentally or otherwise placed on the unburned grains of powder that go to make tattoo marks or "powder-burn." We purposely contaminated the powder charge of 24 Springfield carbine cartridges and fired these into 24 targets of agar-agar and gelatin plates at five feet. Each target contained four of the plates secured in place by wires. Out of eighty plates thus prepared—the others having been destroyed by the ball or the force of concussion—growth was present in every instance at the end of 48 hours. In order to determine the likelihood of contamination by the disturbance of the intervening air, twelve shots were fired with sterile powder into twelve targets of four gelatin plates each. Growth only appeared in 5 per cent. of the 48 plates when placed in the incubator, showing that the opportunity for contamination by currents of air that are forced against the target by the propulsion of the charge is very small.

3. *Smokeless Powders.*—The bacteriology of smokeless powders was next considered. The experiments about to be described were conducted with the "Peyton powder"—a compound of nitro-cellulose—now used by the U. S. Army in the military rifle. Although we have every reason to believe that this powder is contaminated by handling in the same way that the old black powder is, we fail to obtain growth when we place a few grains of it in media like bouillon, gelatin or agar-agar, etc. This powder imparts a yellowish color to the media. After repeated trials I have failed in cultivating *B. prodigiosus* in bouillon to which a few grains of the powder had been added. It would seem from this that the Peyton powder contains a substance which inhibits the growth of certain bacteria in the media mentioned. On the other hand, if a bouillon tube containing a few grains of Peyton powder is inoculated with anthrax spores, growth will be noticed at the end of 24 hours under favorable conditions of temperature, showing that the restraining influence of the powder does not apply to the more resistant forms of germ life.

If the experiment of firing black powder into agar-agar or gelatin plates be repeated with the Peyton powder, whether this be sterilized or not, the powder grains which are caught on the media impart no growth as a rule. The yellowish discoloration already mentioned is invariably noticed around each grain. If, however, we purposely mix earth in the proportion of 10 to 20 per cent. with the powder before firing, colonies will appear in great numbers in the media beyond the area of discoloration, and sparingly, if at all, within the latter.

Out of six gelatin plates fired into at ten feet with the Peyton powder, which was previously contaminated with dust, colonies were observed in two of the plates. More recently on working with the Dupont brand of smokeless powder we have observed growth in a small percentage of the samples examined. Nimier and Vincent, in their experiments with the explosive used by the French, and Deubler, while experimenting with the smokeless powder of the Austrians, established that their smokeless powders were contaminated, although they failed to isolate pathogenic cocci.

4. *The Wads.*—The wads were examined as follows: Twelve pasteboard wads from as many .22 caliber cartridges used in the toy pistol manufactured by the Dominion Cartridge Company, were removed with an aseptic pin from their shells and dropped into separate tubes of bouillon. Growth was present in every tube, both aërobically and anaërobically in the Novy jar. These tubes were then examined for tetanus and malignant edema, by animal inoculations, with negative results.

Similar examinations were made of wads composed of felt and cardboard from other firms, with evidence of contamination in every case. The results are not surprising, in view of the source of the material entering into the composition of the wad as well as the absence of anything in the technic of manufacture which is calculated to destroy infection.

The influence of the heat of ignition was tested by firing wads into plates of gelatin and agar-agar. Sterile wads were contaminated with dust within and without, on the surface next to the powder and that facing the target, and in every instance the result proved that the wad remained contaminated.

Having shown that the act of firing failed to destroy micro-organisms that were casually placed in the ammunition, we next proceeded to experiment with distinct bacteria.

IV. THE TRANSMISSION OF DISTINCT BACTERIA BY VARIOUS MEANS IN FIRING: B. ANTHRACIS, B. RUBER, B. COLI, STREPTOCOCCUS PYOGENES AND B. SUBTILIS.

In 1892-5 we were able to show the effect of firing bullets and powders that had been previously contam-

inated with distinct bacteria. For this purpose we infected bullets and powders with anthrax and fired them from different weapons with the following results:

Bullets.—Before we undertake a recital of these experiments it may be well to recall the fact that we have already demonstrated that unclean bullets, such as those taken from the floor of an unswept room, the ammunition belts of soldiers, etc., when fired in sterile cotton, are not purified by the act of firing. To make this more apparent we conducted additional experiments as follows: From a sterile .38 caliber Colt's revolver, at ranges varying between five and ten feet, we fired 17 shots into baskets of sterilized jute or cotton. Each ball was previously infected with anthrax spores in a small hole drilled into the point of the missile and the hole sealed with yellow wax. After each shot the bullet was taken from the sterile cotton and the wax removed. The ball was dropped in a tube of bouillon, agar-agar or gelatin, and, in the case of the latter, it was converted into Esmarch rolls. Of the 17 tubes thus prepared, the *Bacillus anthracis* was recovered from 16, the failure being an instance where the ball was split into two parts by striking the basket. The focus of infection was very likely destroyed. We next infected the surface of the conical ends of five bullets of the same revolver with anthrax spores mixed with grease and wax 1-4. They were fired into a sterile iron target properly screened at a range of thirteen feet. The bullets made a regular impact in every instance, striking point on. They were recovered, as a rule, in a number of fragments with sterile forceps and dropped into tubes of nutrient media. Two days later every tube bore colonies of *Bacillus anthracis.* In order to better test the efficacy of the heat generated by the ignition of the powder, we infected four of the bullets with a culture of anthrax spores in the concave base next to the powder. They were fired into the same target and collected under the precautions already mentioned. Each bullet, or the pieces thereof, was dropped in bouillon. Every tube showed growth of the *Bacillus anthracis* at the end of three days. In order to determine this point with regard to the vegetative form of the organism, we infected 11 bullets in their concavity next to the powder with the blood of a mouse that had died of anthrax the night before. The projectiles were fired into the same target at the same range from the sterile revolver. They were dropped in as many tubes of bouillon with positive results in nine of the tests.

The outcome of these four sets of experiments shows that 92 per cent. of the projectiles remained infected after firing.

So far the experiments have reference to low velocity projectiles, impressed by 16 grains of black powder. The amount of heat imparted to the bullet is necessarily very small compared to that which is imparted, for instance, to a .45 caliber projectile of the Springfield rifle, or to the high velocity jacketed projectiles of reduced caliber like those of the Krag-Jorgensen, Mauser, Mannlicher or Lebel type.

The fate of anthrax spores on the Springfield rifle bullet was tested as follows: The bullets, weighing 500 grains, impressed by 70 grains of black powder, were fired into a target of pine boards, one inch thick, disposed at intervals of an inch. Three of the bullets were infected in depressions made by the pressure of a knife blade on the conical end of the lead. The firing was done at a distance of ten feet. The bullets penetrated 17, 18 and 19 boards respectively. As soon as recovered with a pair of sterile forceps, each bullet was dropped in a tube of bouillon. The bullets were very much set up, the grooves already mentioned were entirely effaced, and the tubes were all negative after the lapse of three days, which could only be attributed to the severe friction and mechanical effect to which the projectiles were subjected in traversing the wood fiber.

Three other bullets were infected with anthrax spores, in this instance in the concavity of the base next to the powder, and fired into a target of boards at a distance of ten feet as before. The penetration was 19, 23, and 18 boards in the order of shots fired. The bullets were recovered with sterile forceps and dropped in bouillon as before. The results were positive in two of the tubes at the end of 48 hours.

Along this line of work Dr. Pustoschkin has more recently demonstrated the effects of firing sterile bullets through infected clothing before and after the barrel had become heated from a succession of shots, as well as the effect after contaminating the ball or the barrel of the gun. She experimented with the Swiss military rifle of 7.5 mm., propelling a steel-clad bullet possessed with an initial velocity of 600 meters. (1) The firing was done at 7 meters through pieces of cloth that had been saturated with cultures of 1, *Bacillus ruber;* 2, *Bacillus coli;* 3, *Streptococcus pyogenes;* 4, *Bacillus subtilis.* In every instance the results were positive; that is to say, a sterile ball from a sterile barrel became infected with each of the micro-organisms mentioned when it traversed the infected cloth as shown by cultures of gelatin subsequently pierced by the ball. The experiments prove that a bullet even though possessed with high velocity can become infected in transit; and that the heat imparted to the ball from a heated barrel in addition to what may be acquired by the ignition of the powder is not sufficient to prevent said infection. (2) In this series she infected the body of the bullet with the same organisms. The results in gelatin were again positive, showing that the heat from the friction in the barrel in addition to that derived from the explosion of the powder is not sufficient to destroy micro-organisms placed on the body of the ball. (3) She next infected the conical ends of the bullets with organisms already mentioned. The gelatin was infected with one after the other of these organisms, but it was noticed that the number of colonies was far greater when the point of the ball was infected as compared to the preceding series in which the organism was placed on the body of the bullet. This is properly attributed to partial destruction of the germs by friction, whilst others remained adherent to the inside of the barrel. (4) The last of the series of experiments by Dr. Pustoschkin had reference to the fate of the organism when placed in the barrel of the gun. Sterile balls were fired through the infected barrel with positive results.

Black Powder.—The subject of the transmission of distinct bacteria by powder was undertaken by us at Fort Logan, Colorado, in 1895. We used an old culture of anthrax from an agar slant as follows: The spores were mixed with 55 grains of powder from the shell of the 45 caliber Springfield carbine. The charge of the powder was emptied on a sterile sheet of white paper, and a platinum needle, sterilized by the flame, was passed once into the culture of anthrax spores, and then a number of times into and through the powder until the grains of the latter no longer adhered to the needle. The needle having been again sterilized, it was once more passed through the culture, thence through the

powder as before. This was repeated four or five times for each charge of powder, six in all. The powder, thus infected, and the ball, which had in the meantime been sterilized in the flame, were replaced in the shell. Two Petri dishes containing agar-agar were placed in wire frames and the latter were suspended against a wooden target, four inches apart. The marksman was directed to place the ball as nearly as possible in each target midway between the two plates. In this way a number of powder grains were collected on each of the twelve plates, in four of which the *Bacillus anthracis* developed colonies.

Smokeless Powder.—The experiments herewith were conducted with the Peyton powder, already referred to. The powder was contaminated with anthrax spores as before. Out of six gelatin plates fired into at ten feet colonies of the *Bacillus anthracis* were observed in two of the plates.

(To be continued.)

Clinical Reports.

UNCINARIASIS—REPORT OF A CASE.

GEORGE H. EVANS, M.D.
Visiting Physician to St. Luke's Hospital.
SAN FRANCISCO.

Medical literature during the past year has been prolific with reports of uncinariasis in the United States, and a consideration of these cases would seem to infer that the nematode causing this malady is indigenous to this country. The uncinaria are found in several of the lower animals, as dogs, sheep and cattle in different parts of this country, and the investigations of Stiles[1] of the cases submitted to him for examination have caused him to base a new species on them, which he has named the *Uncinaria americana*, the new-world hookworm, in contradistinction to the *Uncinaria duodenalis*, or old-world worm. The chief mark of distinction lies in the fact that the new species presents the buccal capsule with a dorsal pair of prominent semilunar plates or lips and a ventral pair of slightly developed lips of the same nature, instead of two pair of ventral teeth curved like hooks, and the pair of dorsal teeth, as seen in the old-world form.

It is not intended in this report to enter into the natural history of the hookworm. The reader is referred to the recent articles of Stiles,[1] Clayton,[2] Capps[3] and others who have exhaustively reviewed the subject.

The following case is interesting, bringing up, as it does, the question of the geographical distribution of the *Uncinaria americana:*

NARRATION OF CASE.

David B., age 35, a native of Canada, was admitted to my service at St. Luke's Hospital, June 11, 1902.

Family History.—Father alive and well, mother died of some bowel trouble.

Previous History.—He had had diphtheria, luxation of left shoulder, white swelling of the knee. Previous to going to the Philippines he had spent his life in Canada, Alaska and the Puget Sound region. He was captured by the Filipinos and held captive for fifteen months, during which time he suffered great privation and physical hardship. After regaining his liberty he began to have diarrhea, with painful passages, and his tongue became sore and took on the raw, beefy appearance characteristic of sprue. He became progressively weaker and emaciated. His treatment during this time consisted of internal medication, enemas and light diet, later opium suppositories and morphin for the pain. His stools were irritating to the anus and of very offensive odor, numbering, occasionally, as many as thirty a day. There was no vomiting, but the slightest indiscretion in diet would cause considerable gastric distress and belching of gas. He gradually got worse and, after several months of this treatment, went to the Philippine Civil Hospital, where his stools were examined for the first time, and *Amœbæ dysenteriæ* were found. He was then treated with quinin enemas. Subsequent examination of the stools were negative, but he became worse and finally was put on the transport for San Francisco, arriving here May 23, 1902.

Examination.—Patient was thin, poorly nourished, skin sallow and of cachectic appearance. His tongue was of a raw, beefy appearance, with superficial ulcerations on the margins, and very sore. Buccal surfaces were also eroded and sore. Examination of the heart showed normal area of cardiac dulness; hemic murmur at pulmonary cartilage. Lungs negative. Examination of abdomen negative, with the exception of tenderness on deep pressure over small intestines and colon. Temperature at entrance 96.8, pulse 80. He was having several stools a day, which were light yellow, with considerable mucus. He was given the regulation doses of calomel and put to bed on an exclusive milk diet. As a result of this diet stools became lighter in appearance and less frequent. Several stools were examined for *Amœbæ coli*, with a negative result. Culture plates were made at different times, revealing only colonies of the colon family, no *Bacillus dysenteriæ*; patient's blood did not give agglutination test with a culture of Shiga's bacillus. Subsequent examinations were also made for Shiga's bacillus, but without result. A blood count at this time revealed 3,360,000 red cells; hemoglobin 70 per cent.; differential leucocyte count not made.

Treatment.—July 3, after continued search of the stools, ova of uncinaria were found by the pathologist of the hospital, Dr. Mary Halton. The blood count showed at this time 2,290,000 red cells, 3,150 white cells and 55 per cent. hemoglobin. Differential count: polynuclears, 40 per cent.; large mononuclears, 17 per cent.; small mononuclears, 19.5 per cent.; eosinophiles, 23.5 per cent. The next morning he was given one gram of thymol in capsule, followed at 1 p. m. by a similar dose, later in the afternoon giving him one ounce of castor oil. This was followed by several liquid passages, which were all examined, revealing ova of the uncinaria and one worm. About this time his tongue, which had improved very much on the milk diet to which he was subjected, became decidedly worse and caused him a great deal of pain.

July 12, ova persisting in his stools, he was given four doses of thymol during the day, consisting of one gram each. Following this another hookworm was found in one of the stools.

July 21 there were 2,500,000 red cells, 5,300 leucocytes, 50 per cent. hemoglobin. Differential count: polynuclears, 33 per cent.; large mononuclears, 8 per cent.; small mononuclears, 24 per cent.; eosinophiles, 35 per cent.

July 25, as the ova were still present, larger doses of thymol were given. After a preparatory cleansing of the bowels, four doses of two grams each were given in capsule at intervals of three hours. Examination of the stools following this last administration was negative. There was considerable reaction as the result of this rather vigorous treatment, and he was temporarily put on small doses of strychnin. His condition from July 28 steadily improved. His tongue also became less sore and lost the raw, beefy ulcerated appearance.

August 1 there were 2,450,000 red cells, 5,520 leucocytes, 60 per cent. hemoglobin. Differential count: polynuclears, 43 per cent.; large mononuclears, 5 per cent.; small mononuclears, 21 per cent.; eosinophiles, 31 per cent.

August 6 hemoglobin had increased to 60 per cent. and the eosinophiles had decreased to 24.5 per cent.

August 15 there were 2,660,000 red cells, 7,800 white cells, 65 per cent. hemoglobin, eosinophiles being up to 38 per cent.

September 7 the red cells numbered 3,200,000, leucocytes 5,200, hemoglobin 65 per cent., polynuclears 48 per cent., small mononuclears 24 per cent., large mononuclears 6.4 per cent., eosinophiles 21.6 per cent.

He left the hospital on September 20, promising to return regularly for blood counts. On October 24 blood count revealed 3,300,000 red cells, 7,000 leucocytes, 70 per cent. hemoglobin. Differential count: polynuclears, 58 per cent.; large mononuclears, 5 per cent.; small mononuclears, 17 per cent.; eosino-

philes, 20 per cent. He has failed to report for examination since that date. After the third administration of thymol, though the stools were examined for several days, no further evidence of the presence of uncinaria or its ova was observed.

COMMENTS ON THE CASE.

Though the increase in the number of red cells and the amount of hemoglobin, and the decrease in the eosinophiles were very slow, and, in fact, were far from normal at the time he left the hospital, still the man's rapid improvement from the time of the third administration of thymol and his steady increase in weight, increasing as it did from 105 to 140 pounds when he left the hospital, can scarcely leave any doubt that he has entirely recovered from his malady. This man has disappeared, but careful inquiry of his relatives and friends has elicited the fact that he has, in all probability, never been in other localities than those mentioned in the report.

The uncinaria found in his stools were submitted to Dr. Stiles for classification, who determined them as belonging to the species *Uncinaria americana* (number 9412, parasite collection of the United States Public Health and Marine-Hospital Service). From the fact that the patient was well until after a sojourn of fifteen months in the Philippines, it is hardly probable that he contracted his disease in this country. The inference would seem fairly clear that the *Uncinaria americana* is indigenous to the Philippines. Dr. Capps' case contracted his disease in Panama, and was an infection with the *Uncinaria duodenalis*, or old-world species. Thus we have both species found on the American continent, and, admitting that my case originated in the Philippines, certainly both forms are found there. It is important that these cases should all be properly classified, and it is very important that they should all be diagnosed. That a very large number of cases of extreme anemia with intestinal symptoms are due to this nematode is unquestionably true, and too much stress can not be laid on the necessity of examining the stools in all such cases. Such examinations, carefully made, will not fail to find the ova, if this disease be present.

The symptoms of sprue in this case make it more interesting. There is a dearth of literature on this subject. Manson describes the condition in his "Manual of Tropical Medicine," and it was the topic of discussion in the Section on Tropical Diseases at the annual meeting of the British Medical Association in 1899, where Thin considered the disease as of a specific nature.

Has sprue or psilosis a distinct entity as a disease, or does it exist merely as a group of symptoms in intestinal affections? This question has recently been raised by Musgrave,[4] who autopsied sixteen cases, in thirteen of which it existed as a symptom group in other diseases, and in two of which the uncinaria were found in the intestines, postmortem. His investigations, however, lead him to conclude that "it is more rational to consider sprue as a state or symptom-group occurring in the tropics in chronic diseases, especially those affecting the gastrointestinal canal." Manson[5] also considers it, not as one disease, but a variety of diseases with a series of symptoms in common. That my patient's sprue symptoms disappeared with the disappearance of the uncinaria is unquestionable, whether the disappearance is permanent, however, can not at present be known. An exclusive milk diet will often clear up these symptoms, only to return when mixed diet is resumed. Further researches will be necessary in order to establish the status of this interesting symptom-group.

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Blindness in France.—In a report to the Ophthalmological Society, Dr. Trousseau states that the number of blind in France reaches 31,966; a proportion of 8 in 10,000. This proposition is considerably in excess of that in Denmark, Switzerland, Austria and, above all, Holland, where it is exactly 4.46 in 10,000.—"Medical News."

A CASE OF MYCOSIS TONSILLARIS AFFECTING BOTH TONSILS.

COMPLETELY CURED BY REMOVAL OF THE TONSILS BY ELECTRO-CAUTERY DISSECTION.

RICHMOND McKINNEY, M.D.
Laryngologist to East End Dispensary and to Presbyterian Hospital.
MEMPHIS, TENN.

Miss A. B., aged 28, concert pianist, came to me, Sept. 26, 1902, with a history of having suffered more or less with her throat for the last ten years, the first attack of "sore throat" having begun in Boston while en tour; recurrences having been frequent since. February, 1902, she noticed a whitish formation on both tonsils. This could not be removed by the ordinary means resorted to, such as gargles, sprays, etc. She consulted several specialists in different portions of the country, but none vouchsafed an opinion as to the nature of the disease, nor advised anything in the way of radical treatment.

Examination revealed in the sulcus forward of the posterior pillar of the right tonsil a fan-shaped, whitish growth, apparently fungoid in character. This growth extended from about midway of the tonsil up to the supratonsillar fossa. The tonsil was not hypertrophied to any considerable degree. The left tonsil presented practically the same condition, the growth occupying an identical relation to the organ, but was not so extensive, being perhaps only half the size of the other.

A portion of the growth was removed from the right tonsil for microscopic examination, my opinion being that it was a case of mycosis. The patient was also told that the best treatment would be to remove the tonsil by electro-cautery dissection, thus eradicating completely the source of origin of the growth. Since she was desirous of immediate relief, and had but a short while to remain in town, she consented to immediate operation. After cocainizing the right tonsil thoroughly with a 10 per cent. solution of cocain, followed by an application of adrenalin chlorid, 1/2000, the right tonsil was dissected away with a cautery point in one sitting. I barely had time to complete the operation before the patient, who was of a highly nervous temperament, had a hysterical attack of exceeding severity, accompanied by weeping, numbness of the extremities and tonic spasms of the fingers of both hands. Three weeks later she returned for removal of the other tonsil, and this was done with great rapidity in order to avoid, if possible, another hysterical attack. This was barely escaped, as hysterical symptoms began to manifest themselves toward completion of the operation.

A careful microscopic examination made in the interval between the operations showed an abundance of filaments of *Leptothrix buccalis* and mycelial threads, in various teased specimens that were prepared from the portion of the growth removed from the right tonsil.

This patient was seen twice after the last operation, the most recent examination of her throat having been made early in the present year (1903), and there was no indication whatsoever of a return of the growth of either tonsil.

Mycosis of the tonsils is not a specially uncommon disease, but it is infrequent enough to justify the reporting of such cases as are encountered in which there is no question of the diagnosis. This case, moreover, is unique in at least two respects. First, in that the growth did not consist of discrete rods or tufts, which usually is the case, but of conglomerate patches of fungus. Second, its complete cure by electro-cautery dissection, which must be accounted for by the thoroughness of removal of the organs from which the growth sprang, since it is the experience of every writer on this subject and of all observers of cases that the treatment of mycosis tonsillaris is very unsatisfactory, Grayson stating in his recent textbook on the diseases of the nose, throat and ear, that "Even with the greatest care, the cure of a well-developed case in less than six weeks or two months will be a credit to the practitioner."

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THE DANGERS IN COMPETITIVE COLLEGE ATHLETICS.

Recent statements by prominent educators opposing modern tendencies in college athletics have been accompanied, it happens, by numerous publications with a similar tendency based on considerations of the purely physical dangers. As baseball has been displaced from its pinnacle of student adoration by the more violent football, and as the annual growth in the fierceness of competition is leading to more and more protracted training of the athletes in all competitive lines, whatever serious results may follow are likely to be greatly increased. From the standpoint of the educator the great question lies in the moral effect on the student body as a whole, and on the individuals participating, of the intensity of emotion and of interest that the great intercollegiate contests engender. For a large part of the year the interest of the athlete is centered on athletics at the expense of the many other things that go to make up the college career and training; for a number of weeks the same condition affects the entire mass of students. That both good and bad results may come is evident, and the effort of those in authority will probably be directed to so altering conditions that the good may increase as the bad diminishes, rather than to entirely cut out all intercollegiate contests, as some have urged. Intercollegiate athletic contests have too strong a hold on the public to be exterminated by faculty authority. But in addition to the pedagogic features of the question there are matters of pathologic interest and physiologic development that concern both the student of physical culture and the medical adviser. To the former the burning question is the tendency to center all effort on the team, or nine, or crew, that is to represent the institution in competition, and to which all eyes are turned through profusely illustrated newspaper reports as well as by appearances in public. The result is that a minute fraction of the university population, generally the part that already has through natural endowment or previous training the best physical development, is singled out for all the care, advice and training, while the average student who needs the attention far more is left more or less to his own devices. What should be the great aim of the school, to bring all to a proper degree of general development, is sacrificed to carry a very few to the utmost limits of power in some special line.

The results of excessive development of the few are of more immediate interest to the physician. During the process of training a few conditions are prominent: one is the hypertrophy of the heart, often with periods of dilatation; another is a greatly increased metabolism, attested to by the great fluctuation of weight which often amounts to several pounds during a single contest, and the enormous meals consumed at the training table. A study of the competitors in the annual "Marathon runs," held at Boston during the last few years, has just been reported. It is of much interest.[1] The men were examined just before and just after a run of twenty-four miles. While in some the pulse rate was not much increased, it usually was high, even 180 being recorded. In practically all cases the hearts, already hypertrophied from training, became more or less dilated, often with systolic murmurs. The temperature was invariably raised, and a leucocytosis corresponding in intensity and type with that observed in inflammatory diseases, generally over 20,000, was constant. The urinary examination indicated an active renal hyperemia, albumin, casts and blood being found at first, but these abnormal substances all disappeared in a week. An interesting finding was the decrease of urea for the first twenty-four hours following the race.

All of these changes indicate that in violent athletic exercise there is produced a great mechanical strain on the heart, and the presence in excessive amounts of the "toxins of fatigue" that cause much the same results as acute infection, namely, leucocytosis, fever, and renal injury. That repeated exercise, such as prolonged training in successive years, may lead to permanent injury of the heart or kidney is unquestionable—how frequently such is the case is altogether a different question, needing statistics of athletes after their period of active training, which statistics are obviously difficult of accumulation. The pathogenesis of interstitial myocarditis is too obscure to permit of dogmatic statements, but we know that when a tissue suffers atrophy of its parenchyma cells the interstitial tissue usually takes their place, and this fibrous tissue in contracting lessens the blood supply so that further atrophy follows, and thus a vicious circle is established. When an athlete subsides into a quiet life his hypertrophied heart muscle may readily undergo such change, and there is abundant evidence that it does. Constant hammering of a hypertrophied heart on the arteries can not well help shortening the existence of the "vital rubber" in their coats. G. Frank Lydston,[2] writing under the title of "Briefs on Physical Training," calls attention forcefully to the grave results that have been observed to follow in later years the athletic excesses of youth, not only in damaged cardio-vascular systems, but also in disturbed metabolism as manifested in "lithemia," whatever that may be. "The man who gets a great deal out of himself physically before the age of 30 is bound to 'go back' after

1. Observations on Long Distance Runners, edited by J. B. Blake and R. C. Larrabee, Boston Med. and Surg. Jour., 1903, cxlviii, 195.

2. American Medicine, Feb. 21, 1903, et seq.

that period. The man who attains supremacy on borrowed energy—energy borrowed from his physiologic bank—is called on to pay his note sooner or later. He can not do so and goes into physiologic bankruptcy."

If in our fondness for the excitement of athletic contests we are leading to injury of the vital powers of young men, if we are encouraging a system that decreases their prospects of longevity, we may seriously stop to consider if the game is worth the candle. If we must have the excitement we can turn to other fields—the shortening of the life of a race horse, or of a game cock, or even of a professional pugilist, need not concern us much, but perish the thought that modern civilization countenances any form of public amusement that may impair the futures of our best of young men, the college graduates!

MEDICAL SCHOOLS OF LOW STANDARDS.

The rapid development toward higher things in medical education during recent years is most gratifying. The future historian of medicine in this country no doubt will be struck with the general elevation of requirements for admission to medical study as well as the improvement and arrangement according to approved pedagogic principles of the medical curriculum that he will note have been and are taking place in so many medical schools of our time. It is probable, too, that he will trace much of this development to the influence of a few schools that had the wisdom to set their standards at what at one time may have seemed unattainable and impractical heights, but with the very practical outcome that there were disclosed a much greater number of young men anxious for that sort of a medical education than even the most sanguine enthusiast had anticipated. This gave medical educators the highest standards for actual comparison and not merely mediocre ones, and a general movement away from low standards started. This movement is still in its inception.

Much discussion of the many and difficult problems involved in a comprehensive elevation of the standards of medical education is still before us. The burning question for some time will be how best to deal with the manifestly inferior schools, the schools with low entrance requirements, low standards of teaching and low standards for graduation. The normal death rate among these institutions is still very small, but with a decreasing birth rate and, let us hope, a surely but slowly increasing death rate, their period of greatest harmfulness has probably reached its climax to enter on a gradual decline. There are, however, various methods by means of which the harmful influence of these schools can be curtailed still further.

In the first place it seems to us that the various state boards can do more than has been done to raise the standards of medical education of the applicants admitted to state examinations by specifying more exactly the minimum standards of entrance requirements to be adopted and followed by so-called recognized schools. Surely the very least that must be demanded by way of entrance requirements is a good high-school education or its equivalent, and after adopting some such standard, whatever it be, the higher the better, the state boards should demand that applicants for state examination furnish unquestionable proof of their having fulfilled this requirement before entering on the medical courses. In connection with this it must be said that high schools and other schools differ most widely in the quality of the work they do; hence the state boards should adopt regulations specifying exactly the amount and may be the kind of work that must have been done in order to satisfy their demands as to the applicant's fitness to begin the study of medicine. In the next place, the state boards could do a great amount of good by changing the character of the examination they now give applicants for license to practice. The examination now is written. The questions asked are such that the answers form no real test of the fitness to practice of those examined. A vigorous spell of cramming quiz-compends enables any medical student of ordinary mental ability to pass the examinations as now given in many states. As has been pointed out before in these columns, the examinations for license to practice should be practical; they should include practical work at the bedside, in the dissecting room and in the laboratory. The superiority of this kind of examination over the ordinary written examination in testing the real qualifications of applicants is so self-evident that no further discussion is necessary at this time.

Something would be accomplished, too, if the American Medical Association were to demand a certain definite minimum of premedical education as a qualification for membership after a certain period of reasonable length. This requirement would have manifold increased force if it were adopted also by the affiliated state societies and the respective local societies.

If decided steps were taken in the directions indicated the general effect would be, first, greater discretion on the part of medical students in the selection of the schools at which to take their medical courses; second, a determined effort on the part of the low-standard schools to rise from their present low estate, and in this invigorated process of differentiation the law of the survival of the fittest would be felt in full strength.

The discussions concerning the needed elevation of the standards of medical education in this country have dealt so far almost exclusively with the purely educational and technical features of the medical schools in preparing future physicians for their life work. It is to be hoped that some thought may be given also to the moral welfare of medical students. Will the moral atmosphere and influence of the low-standard school, especially in the large cities, be better or worse than that of the school with high educational standards? This is a question that medical men in general are competent to answer. Let each answer it to himself according to his light and use his influence accordingly.

TRUTH AND FALSEHOOD IN MEDICINE.

In a very interesting paper Dr. Richard C. Cabot[1] discusses the use of truth and falsehood in medicine. He calls it "an experimental study" and gives his own experience. It is generally held by physicians, we presume, that truth can not always be told, and many even hold that actual fiction is often justifiable.

There has developed a sort of popular medical casuistry which makes us sometimes step down from the high moral plane of absolute truth-telling as an almost necessary course of conduct. Dr. Cabot admits that he has told many lies that he has thought necessary, but he also shows from his own personal experience how practically useless this has been to him, and he has learned how much easier it is to tell the truth. The temptations to do otherwise are often great, and it would seem absolutely a risk in some instances to follow the straight path. Nevertheless he has found the innocuousness of truth, when reason and experience would lead one to believe it must do harm, more surprising to him than the remarkable tolerance of the febrile patient for alcohol. Of course, the truth does not necessarily always mean the blunt and naked truth, but simply the conveyance of a true impression and the avoidance of anything that is liable to produce a false one. It is not necessary to go at length into the details. The patients understand that themselves. They do not expect it. What we should do is make the patient understand in a general way the actual condition and at the same time to put before him the better possibilities. The confidence of the patient is a very important thing in medicine, and certainly that is not gained or retained if he finds the physician is withholding facts or trying to mislead.

A lie, understanding by this a misrepresentation intended to deceive, is an ugly thing to let loose, and one never knows what will be the consequence, especially the remoter ones. It is astonishing how negligent of this truth many people are and how much evil is being daily done by this negligence. One of the most striking instances of this, perhaps, which is not referred to by Dr. Cabot, is in the management of the insane. A large part of the difficulties and work of the physicians and asylum officers is in judiciously correcting false impressions which have been made on the patients before their admission. In many cases the after-effects can not be altogether removed.

There may be cases, Cabot admits, where patients do not react from the shock of the cruel truth, and he asks whether we are to persist in telling the truth, even when we believe it may kill the patient. His answer to this question seems perhaps a little harsh. He says, if it lay in our power to let loose in the atmosphere a poisonous gas that would vitiate the air so that the whole community would suffer in physical and moral fiber, would it not be worth a human life to save the whole community from such a deterioration. A lie seems to him to be something like that. We doubt whether many physicians will be in a position, even when they review all the facts of the case and look at it from a judicial standpoint, where it will seem necessary to them to often try to save a life by a lie or it will seem possible to them to prove that the truth can kill a patient. There are many ways of avoiding harsh truths and of so telling them that it will render them comparatively harmless. We have never yet been in a position where it seemed absolutely necessary and morally right, however convenient it might be, to tell a downright lie.

Dr. Cabot also extends his idea to deceptions in treatment, and urges the omission of placebos. No patient, he says, whose language we can speak or whose mind one can reach needs a placebo. He gives them now and then to patients with whom he can not communicate, but refuses to give them when an interpreter is to be had. He sums up the results of his experiments with truth and falsehood that he has not found the case where a lie did not do more harm than good. His belief is that anyone repeating the experiments will have the same experience. Truth-telling is not always so easy as lying, but its results are infinitely better. The article is one that could be well reprinted and circulated as a part of the ethical instruction of the candidates for medical practice.

1. American Medicine, February 28.

MENTAL CONDITION OF THE HABITUAL CRIMINAL.

While there are, unfortunately, some regrettable abuses in the good that the medical profession has accomplished by pointing out that crimes against life are often committed by those who are not responsible for their actions, there is no doubt that one of the greatest humanitarian advances of our time has been secured in this matter. Medical men must not be content with this, however, but must extend still further their influence over public opinion and legislative action so as to secure greater amelioration in a proper spirit of the present attitude toward the criminal and his punishment. Crimes against property are undoubtedly often committed by those who have no proper moral responsibility for their acts and who, though they may have to be taken care of by the state in order to prevent further depredations on the property of others, are yet in no condition of mind to deserve, or be benefited by, punishment properly so-called. For all punishment should imply at least the hope of reform, and many of those who commit crimes against property are incapable of moral improvement. This fact is recognized frankly with regard to certain classes of these unfortunate persons who are known as kleptomaniacs. But there are others for whom an improvement in the present legal method of treatment is specially eminently desirable and can probably only come through the wisely directed influence of the medical profession.

The histories of burglars and thieves are very common in the columns of our daily newspapers. It is unusual

to find an arrest made for a first offense. There is usually the story of previous crimes or robbery and of repeated convictions. Four or five previous convictions are not unusual, with several escapes from sentence because of legal quibbles, or because the injured party refuses to prosecute. In two recent cases of burglary that have been prominent in the newspapers each of the accused has been previously convicted in three of the large cities of the country. There is no doubt in the minds of those familiar with the psychology of criminals and their ways that when these prisoners have served the next sentence to be inflicted on them they will return to their old method of life. The fact of the matter is that they are not so constituted mentally as to be deterred by the disgrace of conviction for felony or be reformed by the supposed punishment of imprisonment.

A little over a year ago Sir Robert Anderson, K.G., who was for many years chairman of a parliamentary committee for the supervision of criminal affairs in England, deprecated this state of things in a striking article in one of the prominent London magazines.[1] He said:

> The widely circulated advertisement of one of the burglary insurance companies contains the startling statement that there are 70,000 thieves known to the police. I am speaking seriously and deliberately and I appeal to all who have any confidence in my judgment and knowledge of the subject to accept my assurance that if not 70,000 but SEVENTY known criminals were put out of the way the whole organization of crime against property in England would be dislocated and we should, not ten years hence, but immediately, enjoy an amount of immunity from crimes of this kind that it might seem Utopian to expect.

Almost needless to say, the same condition of criminal affairs holds in this country as in England. The measures of reform that Sir Robert suggests have as great an interest for us as for the people of Great Britain. His conclusion is:

> No one need be either a Solon or a Fouché to understand that if the fear of consequences will avail to deter from crime, the consequences should be made adequate to that end. And if there are those whom no fear of punishment will restrain, they should be treated as lunatics and caged in a suitable asylum.

The present trend of improvement in the treatment of criminals whose crimes are against property is towards the recognition of their previous record as the only possible method of determining an adequate sentence. After such a criminal has shown the virtual improbability of reform and the non-deterrent effect of punishment by a second offense of the same kind, he should never be allowed to be out of the close surveillance of the authorities until he has proved his capacity for moral reformation. A few years ago it would have seemed absurd to promise that the great commercial ports of the world could be made absolutely free from danger of invasion by such epidemic scourges as cholera and plague that had been so dreaded in the past. That promise has been fulfilled, however, by a careful investigation of the elements of danger and a rigid enforcement of the quarantine regulations necessary to secure cities against incoming infection. It looked originally as though all commerce would have to be excluded for a considerable time if security were to be assured during the prevalence of an epidemic. Now we know that a short detention of comparatively very few vessels gives absolute safety. So, too, it would seem that the frank recognition of the pathologic side of crimes against property would give a new aspect to the punishment of such criminals and the sequestration or persistent surveillance of a comparatively few criminal natures would give us almost complete relief from the worst of present conditions.

1. Nineteenth Century and After, December, 1901, p. 960.

CENTENARIANS IN THE UNITED STATES.

According to newspaper statements, the U. S. Census for 1900 finds 3,536 persons in the United States who are 100 or more years of age. The value of these figures may be questioned, and perhaps may be best estimated by the fact that 72.8 per cent. of the whole number are negroes, many of whom undoubtedly have but very remote ideas of their own age. There are persons of comparative intelligence who can take care of themselves in the ordinary pursuits of life in the society where they find themselves and yet have but the vaguest notions of their early years and of the date of their birth. We remember meeting one such person, not exactly a civilized individual, but an aborigine and one of sufficient intelligence and influence to be a sort of chief among his fellows, who, according to his own figuring, was 268 years of age, but actually was probably about 70. Probably many of the colored centenarians whose names have been collected by the census agents would reveal a similar state of things by careful examination. It seems improbable, too, that this country should have over 3,500 when Germany with a population of nearly 55,000,000 has only 778, and England with 32,000,000 only 146; and France with 40,000,000 has only 213. Among the foreign born the largest number of the alleged centenarians are Irish. Some aged Irish women (for most of these are females) have often a wonderful imagination, and sometimes their ideas are not entirely in accordance with facts. They may honestly believe that they are 100 years of age, but this does not prove it to be true. Of course, there are many centenarians, but each case should be thoroughly scrutinized and accepted only with strong corroborative evidence. While we have no doubt that the United States will show as many centenarians, and probably more, than most other countries, the census figures seem to us rather unreliable.

"DIED AS THE RESULT OF AN OPERATION."

How many people annually lose their lives because the popular dread of the surgeon's knife has prevented them from submitting to necessary operative treatment? Obviously it is impossible to answer this question with any certainty, for the number of patients who refuse operation after being informed of its necessity probably constitutes but a small fraction of the total, the larger part consisting of those who keep away entirely from the

physician, or who fly to the quack with whom "curing without the use of the knife" has always been the most alluring of baits. We have indeed heard of a widely advertised "eye specialist" who accomplishes feats in the way of straightening crossed eyes "without the knife" by simply using scissors, to which the knife-dreading patient readily submits. And how many patients will suffer terrific tortures from indiscriminating and ineffective caustics rather than undergo a painless operation under anesthetic for malignant growths? One of the many factors responsible for this mistaken fear has always seemed to us to be the frequent, almost constant form adopted by the lay press in reporting deaths following operative intervention of whatever kind, in the words: "Mr —— died yesterday as the result of an operation for," etc. In a great part of the cases the correct wording would have been: "Mr. —— died *in spite of* an operation," etc. For example, deaths following operation for appendicitis almost invariably are reported in the manner above described, although the operation for appendicitis *per se* would have but a most minute mortality. In many instances the error becomes extreme, as in the report of a death "from an operation for blood poisoning," when the operation in question consisted merely in draining the primary suppurating focus in the hand or foot. "Continual dropping will wear away," etc., and the natural outcome of the reiteration of this stereotyped expression is a popular misunderstanding of operative results that leads to a fear that is often fatal. Yet what can we say of the lay press in the face of the fact that the same unthinking phrase far from rarely makes its way into medical journals? If the operation did cause death, well and good—we wish nothing but the bare truth—but when death has been in spite of operation, and in many instances because this very fear has led to its postponement, then let us again have the fact stated truthfully and accurately.

THE "BATTLE OF THE CLUBS" IN GERMANY.

The Deutsche Aerztetag, which, we believe, is made up of delegates from the German medical unions (Aerztevereins), recently held a special (ausserordentliche) session at Berlin. It appears from the more or less complete reports published in the German weeklies, to have been of unusual interest. The subjects discussed were those relating exclusively to the material and social interests of the profession and largely matters concerning the German workingmen's relief and insurance associations (Krankenkassen) and actual and proposed legislation in regard to them and their relations to the profession. Evidently our German confrères have many reasonable grounds for complaint; the same tendency of the benefit societies to exploit the medical profession that is the cause of so much trouble in Great Britain is only too apparent in the German empire. Thousands of the Krankenkassen, according to one speaker, pay as little as 8, 6 or even 4 pfennigs for a physician's call. Over half of the Krankenkassen practice may be considered as charity work on the part of the physician, and most of these institutions have as their obvious object only the reduction of the physicians' fees. Instead, moreover, of being the resource of the really poor, to whom a reduction of the medical charges would be justifiable, these societies are utilized also by the well-to-do, thus defrauding the profession of its legitimate earnings. The Gera case, which has been mentioned in this journal two or three times, was, of course, discussed, as well as other attempts to degrade the profession by the association in these societies with quacks. Misleading statistics and misrepresentations in the press have helped to prevent the due attention of the legislators to the recommendations of the profession, and it was recognized that only through the organized effort of a united profession could the needed reforms be secured. The speakers saw encouraging signs in certain recent events, among them the Gera incident, the harmonizing of factions in the profession at Munich and its increased influence as brought out by thorough union and organization elsewhere. The discussion shows that the same problems exist in Germany as in Great Britain, and we can profit by watching how our brethren meet them in those lands. We have troubles of our own that we must meet in our own way, but there are others we share with the rest of the world, and it is only by organization and united effort that we can prevent the disastrous exploitation of the profession here that is already so strongly in evidence elsewhere. As we have said before, club practice is not yet a serious problem in this country except in a few localities, but it is a very threatening one.

Medical News.

CALIFORNIA.

Smallpox.—Smallpox is said to be raging among the Digger Indians of Long Valley and threatens to exterminate the tribe. ——A case of smallpox has been discovered at the Napa State Hospital.

Retired After Long Service.—Dr. Charles A. Ruggles, Stockton, who has served for fifteen years as a member of the State Board of Health, and for four years as its president, was retired from the board recently by order of the governor.

German Hospital for Los Angeles.—The "Deutscher Hospital Verein" has recently been organized in Los Angeles, with Dr. Joseph Kurtz, president. The object of the organization is to build a new hospital in the city, using as nucleus $20,000 bequeathed for this purpose by Mrs. Werner, who died last year in Germany.

Split in Hospital Staff.—Four of the original incorporators of the Clara Barton Hospital, which was founded two years ago in San Francisco, owing, it is said, to disagreements regarding the management of the institution, have resigned. The new president is Dr. Emmet L. Wemple and the new secretary, Dr. J. Henry Barbat.

New State Board.—The new State Board of Health appointed by Governor Pardee met at Sacramento, April 1, and organized by electing Dr. Matthew Gardner, San Francisco, president, and Dr. Newel K. Foster, Oakland, secretary. The other members of the board are Drs. Oscar Stansbury, Chico; W. Lemoyne Wills, Los Angeles; Wallace A. Briggs and Aden C. Hart, Sacramento, and Martin Regensburger, San Francisco.

Under the Law.—G. W. Richmond, Los Angeles, a member of the "Anti-Drug Association," a magnetic healer and vice-president of the Spiritual Society of Truth Seekers, convicted of practicing medicine without a license, refused to pay the fine of $100, and languishes in jail.——The case against John Miller, alias "Dr. Miller the divine healer," of Bakersfield, charged with illegal practice of medicine, has been dismissed on condition of his leaving Bakersfield for ever.——Dr. J. Carl Bainbridge, Santa Barbara, charged with failure to report a case of contagious disease was found not guilty.——Dr. Samuel R. Chamlee, a "cancer specialist" of San Francisco, has been held to the Superior Court in bonds of $10,000 on the charge of manslaughter. It is alleged that while he was operating for cancer

he severed an artery and allowed the patient to bleed to death. ——Dr. Sarah J. Tedford, San Jose, classified by "Polk" as a lung specialist, was acquitted on March 18 of the charge of practicing medicine without a state certificate.

ILLINOIS.

Epidemic at Greenfield.—It is reported that smallpox is epidemic in Greenfield, where 50 cases are said to exist.

Fee-Bill for Waukegan.—The physicians of Waukegan have formed a defensive union, with Dr. William C. Bouton, president, and Dr. Edward F. Gavin, secretary, and have adopted a fee-bill.

New Hospital at Rockford.—The new St. Anthony Hospital, erected by the Sisters of St. Francis, at Rockford, at a cost of $50,000, was formally dedicated by Archbishop Quigley of Chicago, March 29.

Scarlet Fever, Not "Philippine Itch."—As certain citizens of Lake Forest have declared that the epidemic from which the town is suffering is a disease brought from the Philippines and transmitted from the troops at Fort Sheridan to the town, Dr. George W. Webster, president of the State Board of Health, and Walter S. Christopher of Chicago visited Lake Forest, examined a number of patients and pronounced the disease scarlet fever. The quarantine period has been extended until to-day. It is reported that there are 150 cases of the disease in Lake Forest and the neighboring towns.

Chicago.

Personal.—Dr. Theodore J. Bluthardt has been appointed United States Consul at Barmen, Germany.

Again Exonerated.—Dr. T. Jordan Balhatchett, who was acquitted of embezzlement, and was thereafter charged with larceny as bailee, was exonerated a second time April 2.

Mortality of the Week.—During the week ended April 4, 549 deaths occurred, equivalent to an annual death rate per 1,000 of 15 18, a substantial reduction from the high death rate of the previous week. Pneumonia again leads with 105 deaths; then follow consumption with 68; heart disease with 50; nervous diseases with 39; Bright's disease with 33 and violence with 31.

Influenza and Complications.—Regarding the influence of this disease on the mortality rate, the health department makes the following statement:

> Influenza has been more prevalent during the first four months of 1903 than at any time since 1891, and of the 350 deaths last month in excess of the number for March, 1902, 330 are shown by the physicians' certificates to be due—not to influenza direct, but to influenza as a fatally complicating cause of death from pneumonia, consumption, Bright's disease, heart diseases, bronchitis, measles and whooping cough, in about this order of frequency.

Deaths in March.—With one exception—that of March, 1895—last month's death rate was the highest since March, 1893, and the excess is accounted for by the mortality from influenza. The average March death rate for the previous ten years was 15.93 per 1,000 of population; for this March it was 16.94, or 6.3 per cent. higher than the ten-year average. In 1893 it was 19.18, in 1895 it was 17.88, and in 1899 it was 16.75 The total deaths from all causes was 2,703; 728 of these were under 5 years, and 573 over 60. Pneumonia heads the list with 582 deaths; consumption was the cause in 280 cases; heart disease in 207; violence in 153; Bright's disease in 142; nervous diseases in 132, and bronchitis in 127.

MARYLAND.

Baltimore.

The Deaths.—The deaths for last week were 187, 17.66 per 1,000; 20 were from pneumonia, 19 from consumption, and 5 from grip. One case of smallpox was reported.

Trachoma Excludes.—The special board of inquiry of the United States Immigration Bureau decided on the exclusion of 12 immigrants, with trachoma, who were landed here. They will be returned at the expense of the steamship company.

Toward Tuberculosis Sanatorium.—The Quarter Club has collected $3,000 toward the tuberculosis sanatorium and about $4,000 of the $25,000 necessary to secure a gift of $25,000 by some unknown benefactor has been raised. It has been determined to open a sanatorium in the Blue Ridge this summer, a cottage and a number of tents being used for the accommodation of patients.

MASSACHUSETTS.

Conditional Constitutionality.—The Supreme Court of Massachusetts has decided that their compulsory vaccination law is constitutional, but that a man who thinks vaccination is unnecessary can not be treated by force. He would, however, be liable to a fine of $5.00 for each such refusal.

Typhoid at Lawrence.—Lawrence, Mass., is in the midst of an epidemic of typhoid fever, apparently due to the practice of operators of the Pacific Mills of drinking unfiltered river water. This they do because the water running in the canal is cold, while that furnished for them to drink is unpleasantly warm.

Staff Changes.—The following changes have taken place in the staff of Noble Hospital, Westfield: Drs. George W. Brace and Fred. P. Lowenstein were appointed to the medical staff; Dr. James S. McLaughlin succeeded Dr. Edwin D. Hutchinson, resigned, on the surgical staff, and Dr. Hutchinson was appointed consulting surgeon.

Dread State Institution.—The manufacturers of diphtheria antitoxin and vaccine virus have offered to furnish to the State Board of Health the products at a price lower than the cost of production to the state, and of a standard quality verified by governmental inspection, provided the legislature will refrain from appropriating money for a new state institution for their production.

Disease and Death in Boston.—For the week ended April 4 there were 214 deaths in Boston, an annual death rate per 1,000 of 19.04. There were reported 44 cases of diphtheria, with 3 deaths; 30 cases of scarlet fever; 20 of measles, with 1 death; 10 of typhoid fever, with 2 deaths; 18 cases of tuberculosis, and 24 deaths from this cause; 2 cases of smallpox, with 1 death. Pneumonia caused 29 deaths, whooping cough 8, heart disease 20 and bronchitis 5.

Street-Car Regulations.—Regulations forbidding spitting in street cars are common about Boston. Cambridge has taken another step: "Every street railway passenger car (closed) operated in Cambridge shall, while so operated, be properly ventilated; such cars shall be thoroughly aired at the end of each round trip; every such car shall be thoroughly cleansed at the end of each day's service and shall be disinfected once each week." A violation of these city ordinances involves a fine not to exceed $100.

NEW YORK.

The Situation at Ithaca.—The death-roll at Ithaca from typhoid fever now numbers 65. Only 3 new cases have been reported since the issue of last week.

Coroner's Bill.—At last, after a sensational political fight, the bill of Senator Elsberg, abolishing the office of coroner in New York City has been passed, and in its place is to come a system of medical examiners connected with the health department.

Prisoners Tuberculous.—Dr. Julius B. Ransom, physician of the Clinton State Prison, Dannemora, is reported to have said that one-fourth of the prisoners in that institution are afflicted with tuberculosis There are 250 prisoners thus affected, with hospital accommodation for only 54.

February Deaths.—The state health commissioner reports 10,826 deaths during February, which compares unfavorably with the average of 10,492, which has prevailed for the corresponding month in the previous five years. Influenza caused 1,500 deaths, pneumonia 1,223 and Bright's disease 802.

New York City.

Surgeon in Accident.—Dr. Francis W. Murray, one of the surgeons of the New York Hospital, narrowly escaped severe injury from the wrecking of his carriage by collision with an electric car. As it was, he received several minor injuries, and his coachman is not expected to live.

Ophthalmia Among Teachers.—It is said that two school teachers have developed a virulent and specific form of ophthalmia, supposedly from the handling of public school books. Details are lacking, but it seems strange that should be the case unless the same disease were very prevalent among the schools where the books are constantly handled by the teachers.

TENNESSEE.

Medical Staff Election.—The medical staff of Knoxville City Hospital met, March 23, and elected Dr. Benjamin D. Bosworth, president; Dr. Claudius M. Capps, vice-president, and Dr. Charles H. Davis, secretary.

State Board Examinations.—The first general examinations of applicants for license to practice medicine, since the law came in force, were held at Memphis, Nashville and Knoxville, March 30 and 31. About one hundred applicants were examined, fifty-nine of whom were examined in Nashville and thirty-two in Knoxville.

Medical Students Die.—Charles S. Lewis, one of the senior class at Chattanooga Medical College, recently died, and the combined classes of the college passed resolutions expressive of their sorow and eulogizing their deceased colleague.——Mr. Clements, a student in the medical department of the University of Tennessee, Nashville, died, March 10, aged 36.

Personal.—Dr. G. Chris Savage, Nashville, was operated on for appendicitis a few days ago and is making a good recovery. ——Dr. Fleetwood Gruver, Nashville, has been appointed assistant surgeon in the U. S. P.-H. and M. S. Service and assigned to duty at Port Limon, Costa Rica.——Dr. John R. Parker, Sideview, has been appointed assistant surgeon in the Navy with the rank of ensign.

Half a Century in the Society.—The Nashville Academy of Medicine and the Davidson County Medical Society gave a banquet April 7 in honor of Dr. Thomas L. Madden, Nashville, celebrating the completion of fifty continuous years of membership in the Tennessee State Medical Society. The committee in charge of the banquet consisted of Drs. W. Frank Glenn, D. Bigelow Blake and Deering J. Roberts.

New Physicians.—The fifty-second annual commencement of the medical department of the University of Nashville was held March 31. Chancellor James D. Porter conferred the diplomas on a class of forty-nine and Hon. A. B. Anderson delivered the faculty address.——The University of Tennessee held its closing exercises April 3. A class of thirty-six was graduated. Dr. D. Bigelow Blake delivered the charge to the graduates and Gen. Harvey H. Hannah delivered the address of the evening.——Tennessee Medical College, Knoxville, graduated a class of eight, March 31. The charge to the graduates was given by Dr. Samuel L. Jones and the dean, Dr. Charles P. McNabb, conferred the degrees.——The medical department of Walden University, Nashville (Meharry Medical College), graduated a class of forty-one, March 2. President L. M. Dunton of Claflin University, Orangeburg, S. C., delivered the address of the evening. President J. Benson Hamilton conferred the degrees.

TEXAS.

Made Chief Surgeon.—Dr. James A. Moore, Marshall, has been made chief surgeon of the Texas and Pacific system, vice Dr. Benjamin F. Eads, Marshall, deceased.

Public Hospital at Waco.—The Sisters of Charity of St. Vincent de Paul have agreed on a site in Waco whereon they will build and equip a public hospital. The plans for the hospital are almost completed.

Hospital Car.—The medical department of the Southern Pacific has secured the car "Nacogdoches" and is having it fitted up as a hospital car. It will be kept in Houston, but will be ready to go promptly when and where needed.

Dallas Medical College.—The commencement exercises of the medical department of Trinity University, Dallas, were held April 1. A class of twenty-nine was graduated. Dr. Hugh L. McNew, dean of the faculty, presided and awarded the prizes; Rev. R. C. Kirkes, president of the university, conferred the degrees, and Rev. D. C. DeWitt delivered the address to the class.

VIRGINIA.

New Hospitals.—The new Protestant Hospital at Norfolk was opened to receive patients March 25. The formal opening will occur in about a week.——Winchester Memorial Hospital was opened March 18. Dr. Hunter H. McGuire is president of the institution.——Richmond Hospital, designed for the especial care and accommodation of colored patients, and purchased and equipped at a cost of more than $9,000, was opened for the reception of patients February 16.

Personal.—Dr. Ballard R. Smith of Greenville, Va., has moved to Baltimore.——Dr. William Wertenbaker, physical director and laboratory assistant in biology at Washington and Lee University, has resigned and located at Ansted, W. Va. ——Dr. William F. Creasy, Newport News, has been appointed quarantine officer of the port, vice Dr. Samuel W. Hobson, term expired.——Dr. John T. Graham, Wytheville, fell recently in his office and fractured his arm.

Dr. Drewry Vindicated.—The Senate Committee on Public Institutions met March 26 and adopted a report in relation to the charges made against the management of the Central State Hospital, Petersburg, by Dr. Richard T. Styll, Newport News. The committee found that the charges were groundless and adopted resolutions praising the administration of the affairs of the hospital by Dr. William F. Drewry, the superintendent, and stating that the business and financial affairs of the institution have been administered in a way deserving of the highest commendation.

Eddyites and Osteopaths and Faith-Healers Defeated.—By the terms of a bill relating to the practice of medicine, as amended by the Senate and which the House passed with only one dissentient vote on March 27, healing by prayer for pay in Virginia will be unlawful and punishable by fine and imprisonment. Eddyites and osteopaths joined hands in the lobby for a bill amending the general law requiring the examination by the state medical board of all who practice medicine. The Senate's action of March 6 is a complete defeat for them. The Eddyites held that healing by prayer for pay should be licensed; the osteopaths wanted representation on the board, but failed to secure it.

GENERAL.

Mexico Quarantine Raised.—The quarantine against San Francisco has been raised by Mexico and many fully-loaded ships have hastened to resume the trade that had been interrupted. Guatemala has quarantined against all Mexican ports.

Diphtheria at Navy Yard.—An epidemic of a severe form of diphtheria has broken out at the Norfolk, Va., Navy Yard. One man has died, about 10 are sick and some 50 are suspects. There are 1,500 men on the receiving ships. Antitoxin is being freely used and all precautions taken.

Vigorous Plague Investigation in San Francisco.—A thorough exploration of Chinatown is being made by the allied health authorities. Drs. Glennan, Currie and Lloyd have had attacks of influenza, to which they were said to have predisposed themselves by their prolonged faithful work under unsanitary surroundings.

Diphtheria on Transport.—The long fight of the officials of the U. S. Transport "Buffalo" against the epidemic of diphtheria has ended. Over 150 out of over 400 were sick with the disease, but only 3 died. The outbreak was in December and the ship went to Port Royal, S. C., to establish quarantine and free the ship of the disease.

Mazatlan Plague Subsides.—On March 29 there were only 8 patients left in the lazaretto at Mazatlan. They are convalescing. The outbreak at Villa Union seems to have been suppressed, no case having occurred for almost two weeks. Two sanitary inspectors of the Mexican government were assassinated at Panuco, because of ignorant prejudice of the people.

CANADA.

To Limit Malpractice Suits.—The Council of Physicians and Surgeons of New Brunswick, acting for the New Brunswick Medical Society, has sent to the Provincial Legislature a bill with the object of securing a limit of one year to the time in which an action may be brought for injuries resulting from alleged malpractice.

Victoria, B. C., Isolation Hospital.—In 1902 the number of patients treated in the Victoria, B. C., Isolation Hospital was 92 and the total day's stay 2,101, as against 80 in 1901, with a total day's stay of 1,743. In 1901 the cost of nursing was $1,808.45, and in 1902 it was $3,274.75. The total cost of maintaining the Isolation Hospital was $9,279.44.

Banishing the Cigarette from Canada.—The cigarette was debated in the House of Commons during the past week, and apparently the cigarette must go, for a motion for the prohibition of the manufacture, importation and sale of the cigarette was carried by a vote of 103 to 48. The motion simply points out public opinion on the subject, as the voting did not take place on any government legislation.

Physicians by Act of Parliament.—The "Montreal Star" states that a committee of the Quebec legislature is engaged in the benevolent task of making lawyers, druggists, dentists and physicians "by Act of Parliament." It is of course to be presumed that some of these rather fortunate individuals have found it inconvenient or impossible to pass examinations in the usual way, so they revert to the simple process of getting a bill passed by the legislature. Doctors "made-while-you-wait" is a dictum in Quebec which will no doubt produce a faction of strong force in opposition to the adoption of any such legislation as outlined in the bill now before that house seeking ratification of the Roddick law.

Regulations Concerning Diphtheria and Scarlet Fever in Ontario.—The Provincial Board of Health of Ontario has issued a special pamphlet to physicians calling direct attention to the acts as regards diphtheria and scarlet fever. As regards diphtheria the regulations require that all persons suspected of having diphtheria shall be promptly isolated until a swab has

proved the absence of the disease. Medical health officers are empowered to appoint sanitary policemen where necessary on the outbreak of either diphtheria or scarlet fever, and if these are not sanctioned by the municipality the Provincial Board of Health will then make the appointments. The minimum period of isolation for any case of scarlet fever is put at six weeks. In the case of diphtheria, the time limit shall be twenty-eight days unless swabs shall sooner show the absence of the disease.

Dominion Registration in Quebec Legislature.—Mr. Hutchison, M.L.A., has moved the second reading of his bill to amend the law regarding physicians and surgeons. It provides that whenever there is established under the Canada Medical Act of 1902, a register for Canada of medical practitioners under the said act, any person duly registered shall be deemed qualified and entitled to be registered in the Quebec register on payment of such fees as may be required. In explaining the provisions of his bill, Mr. Hutchison said that there were French-Canadians all over Canada who wanted to have physicians of their own nationality and language, and that, therefore, Quebec province had more to gain by the measure than any other. The bill was opposed by Dr. Pelletier on the ground that it was not for the good of the profession and that the other provinces were not up to the standard of Quebec. This is as far as ratification legislation has got in the Quebec legislature.

FOREIGN.

A London Military Hospital, to cost over half a million dollars, is planned, because present quarters are not adequate.

Plague in Egypt.—A reappearance of bubonic plague is reported from some parts of Egypt and cholera is reported at Alexandria.

New Medical and Hospital Facilities at Copenhagen.—The Danish government has appropriated nearly $2,000,000 for the construction of a new general hospital and medical department for the university. The buildings are to be erected on a large plot of ground in the northern part of the city and to be completed in six years.

Endowments at Frankfurt for Scientific Purposes.—Nearly $200,000 has been collected for the erection of a zoologic museum and physico-chemical institute at Frankfurt a. M. This brings to $2,000,000 the total amount raised there during the last five years for the enlargement and endowment of scientific institutions connected with the scheme of a great university. The valuable land on which now stands the Senckenberg Hospital, etc., is to be sold and the city will donate lands on some of the newer streets in its place, which will add much to the fund.

Antituberculosis Serum from Fowls.—A prominent physician of Nimes, France, Dr. Viguier de Maillane, having been impressed by the resistance to human tuberculosis displayed by poultry, tested the serum from fowls and found that the Koch bacillus will not grow in it, while it has a marked protecting and attenuating effect on tuberculosis in guinea-pigs. After tests on himself and another healthy person to determine its harmlessness, he applied the serum as a therapeutic measure in six cases of tuberculosis. In a communication on the subject to the Paris Académie de Medecine, he reports that the serum had an unmistakably beneficial effect. Three of the patients were very much improved; two practically cured, and only one failed to benefit from the injections. The results indicate that this new serum is most effective in the torpid form of the disease, but that it acts like a powerful tonic in all cases, reducing the cough and expectoration and improving nutrition in general.

Campaign Against Charlatans in Germany.—During the recent trial of the magnetopath Pohl at Berlin, a number of witnesses testified that they had signed testimonials, stating falsely that they had been cured or wonderfully improved, in return for a reduction in the price of treatment. Pohl claimed to heal disease by his personal magnetism which he transmitted to the patient, assuming himself in return the disease. The suffering which this entailed on him compelled him to charge unusually high for his services, about $7.50 for a sitting. He also made use of carbonated baths. He was known to have received $200 from one consumptive who has since died. He was condemned, for "promising the impossible," to a fine of $250 and publication of the decision of the court. Our Berlin exchanges remark that it is a very significant fact that the newspapers which are read most extensively among the working classes entirely ignore these proceedings against charlatans which are written up in detail for the better class of lay papers.——The Posen courts have condemned a "Wonder Doctor," Scholz, to eighteen months' imprisonment for his quack practices and the injuries that have resulted therefrom.

Correspondence.

Michigan Students Protest.

DETROIT, March 24, 1903.

To the Editor:—In an editorial entitled the "Michigan Students' Protest," you took a most commendable view, but were misinformed about the students protesting. The students of the Detroit College of Medicine are in favor of the bill, and I understand that the students of Michigan University at Ann Arbor are also. In fact, the students of reputable colleges have no fear of being able to pass, and are always in favor of a higher standard. J. H. CARSTENS.

To the Editor:—In view of the editorial which appeared in THE JOURNAL, March 21, we wish to state that we regret sincerely that the article was so worded that the impression might be given that the medical students of the University of Michigan are opposed to the passage of the Nottingham bill.

We wish to state that the medical students of the University of Michigan have done nothing, either collectively or individually, to oppose this bill or any of its provisions.

Furthermore, we are unanimously in favor of any means which will tend to raise the standard of medical practice in Michigan, and, believing that the Nottingham bill, if enacted, will have this effect, we are heartily in favor of its passage.

Unanimously adopted by class of 1903. President, F. C. Penoyar; secretary, Maude G. Hinman.

Class of 1904. President, W. A. Scott; secretary, Curtis Evans.

Class of 1905. President, C. W. Merkel; secretary, D. E. Burnett.

Class of 1906. President, J. F. Hastings; secretary, Z. K. Brinkerhoff.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

THE SOURCE OF VACCINE.

EVANSVILLE, IND., Feb. 27, 1903.

To the Editor:—From what source do vaccine laboratories or vaccine farms obtain their original vaccine virus? Do they use the smallpox lymph, or the cowpox lymph, which comes originally from the "grease heal" of the horse? A scientific question of inestimable value is herein to be considered and should be known by every physician. The safe preventive from smallpox would be to vaccinate with the vaccine obtained from cows that had been inoculated by lymph originally obtained from smallpox. F. L. DAVIS.

ANS.—Following the receipt of the above, we wrote to a number of manufacturers of vaccine and quote below from certain of their replies.

The H. K. Mulford Company stated that vaccine virus employed by them is obtained at short intervals from several sources, namely:

"The Jenner Institute of Preventive Medicine, London, England; Chambon & Menard, Paris, France; Institute Vaccinale, Berne, Switzerland; Pasteur Institut, Lille, France, and in addition to these from two sources in the United States. The vaccine virus on receipt is tested and those strains which produce the most typical physiological effect are used in propagating the virus."

Parke, Davis & Co. said: "Our seed vaccine we have obtained from different sources, chiefly European. We have secured various supplies from the Imperial Vaccine Institute of Vienna. Some of the best seed has come from the fine establishment conducted at Berne, Switzerland. All the seed used by us has been, we are perfectly sure, the product of the calf or heifer—not in any instance the virus obtained from human smallpox pustules.

"It is, however, our conviction that smallpox and cowpox are one and the same disease, manifesting itself differently in the two animals under the profoundly modified biological conditions—smallpox in the man, cowpox in the animal. Several German investigators have repeatedly succeeded in directly inoculating calves with the human virus, thus obtaining bovine vaccinia which has in turn produced in human beings perfectly normal vaccinations, affording full protection. The great English authority, Copeman, stated last summer in person to our Dr. Houghton that he had repeatedly inoculated monkeys with the virus of human smallpox, passing it along from one monkey to another, and with the virus thus obtained he has produced in calves genuine vaccinia vesicles, the pulp of which has proved an effective means of inoculating and

protecting human beings. Copeman added that hundreds of people vaccinated with lymph obtained from calves which in turn had been inoculated with virus secured from these monkeys, had exhibited typical 'takes' and many of these people had been subsequently exposed to smallpox without contracting the disease—a fact which would seem to establish the immunizing power of the particular lymph. Clearly, then, cowpox is the result of the direct introduction of smallpox virus into the animal organism, or else the two parallel maladies emanate from the same common cause. The identity of their source is to our mind established by the great preponderance of evidence and authority."

Frederick Stearns & Co. say:

"The original source of our vaccine virus was from vaccine obtained from heifers that had been previously inoculated with smallpox lymph taken from a human being and that too, not indirectly as from cow-pox or from 'grease heal' in some mysterious roundabout way, but directly from human being to heifer, thus modifying it by its passage through the bovine so that it will no longer produce smallpox by direct contagion, but a modified form of it known as vaccine vesicle which confers immunity to the smallpox disease.

"There may be a natural cow-pox, but in our opinion there is no such thing as a cow-pox which will confer immunity to smallpox which had not originally the human source, and as for 'grease heal' it is utterly absurd and unscientific to think of such a thing. We think you will find that the best authorities and the best masters of the art agree with us on this point."

H. M. Alexander denies most emphatically that vaccine is cow-pox and affirms that cow-pox is smallpox. He says further:

"My experiments proved to me beyond any reasonable doubt that vaccine virus was simply smallpox passed through the cow and that it was at first very weak in its action, the first animal inoculated from smallpox direct always taking in a very uncertain manner; but the contagious character so far as the human family was concerned was lost at once. When passed through a second animal it began to assume many of the characteristics of the vaccine disease as seen in the stables. The third and particularly the fourth in all instances was so characteristic of kine pox that it was used and successfully used in a great many experimental cases.

"My continued experience with horse grease has caused me to believe that there is no such thing as horse-grease cow-pox; or, if there is, then the horse grease as we know it to-day is not the horse grease referred to by Jenner."

DYNAMITE HEADACHE.

RUSSET, W. VA., March 26, 1903.

To the Editor:—In your query column, I should be obliged if you would suggest some remedy for what is known here as "dynamite headache." This is caused by the inhalation of the fumes from the dynamite which is used in blasting. I have tried acetanilid in doses of 7.5 to 10 grains combined with caffein cit. and monobromate of camphor, but in a great many cases this has no effect and I am compelled to use morphin before any relief is obtained.

JOHN W. BROWN.

ANS.—On the theory that dynamite cephalalgia is a congestive headache due to vasomotor (arterial) paralysis of the cerebral vessels, hypodermic injections of ergotin, atropin and strychnin, and cold applications to the head have been recommended. The best remedies, however, according to Key (Oliver: "Dangerous Trades," p. 614) are strong coffee, and a linseed poultice to the back of the neck. This is probably a deduction from practical experience, and there may be still others used in dynamite works. Most persons soon become habituated to the fumes and cease to suffer, but there is a great difference in the susceptibility of different persons. We would not suppose acetanilid to be a very satisfactory remedy.

State Boards of Registration.

New Law in Nebraska.—A new law has just passed the Nebraska legislature which requires an examination as well as a diploma, of all applicants for license to practice medicine in the state. Heretofore a diploma from a recognized and approved college was all that was necessary. We shall publish a full abstract of the law next week.

Alabama Law.—The recent law defining the divisions of practice and exemptions from examination therein in Alabama is as follows:

An Act to prescribe the branches of medical learning upon which applicants for the privilege of treating the diseases of human beings in this state must be examined, and to provide for the issuance of certificates of qualification therefor.

Section 1. Be it enacted by the legislature of Alabama, That any applicant for a certificate of qualification to treat the diseases of human beings by any system of treatment whatsoever shall, according to rules prescribed and standards established by the Medical Association of the State of Alabama, be examined by one of the authorized boards of medical examiners of this State in the following branches of medical learning, to-wit: Chemistry, anatomy, physiology, the etiology, pathology, symptomatology and diagnosis of diseases; obstetrics and obstetrical operations, gynecology, minor and major surgery, physical diagnosis, hygiene, and medical jurisprudence, and should said applicant be found proficient in said branches of medical learning a certificate of qualification in such form as shall be prescribed by the said Medical Association of the State of Alabama shall be issued to him, which shall entitle him to treat any and all diseases of human beings in this state in any manner that he may deem best.

Sec. 2. Be it further enacted, That when any applicant states in writing that he has neither studied nor proposes to practice major surgery, said applicant shall be exempt from examination in said branch of major surgery, and should he be found proficient in other branches of medical learning named in Section one (1) of this Act that a certificate of qualification in form to be likewise prescribed by the Medical Association of the State of Alabama shall be issued to him, which shall entitle him to treat all diseases of human beings in this state in such manner as he may deem best except by the practice of major surgery.

Sec. 3. Be it further enacted, That all laws and parts of laws in so far as they conflict with the provisions of this act be and the same are hereby repealed.

Marriages.

R. B. BELL, M.D., to Miss Julia M. Stewart, both of Nashville, Tenn., March 26.

ROBERT M. STONE, M.D., Omaha, Neb., to Miss Belle Noxon of Bee, Neb., April 5.

EDGAR M. HERMANCE, M.D., to Miss Mary Ellerington, both of Yonkers, N. Y., March 27.

MEYLER D. GIBBS, M.D., Willow, N. M., to Miss Grace Wilson of Colorado Springs, Colo., March 9.

D. EDWIN STONE, JR., M.D., Emmitsburg, Md., to Miss Elizabeth Hammond Downey, at New Market, Md., March 25.

Deaths.

James A. Steuart, M.D., died at Baltimore, from pneumonia, March 27, aged 74. He was the son of Dr. Richard Steuart, founder of Maryland Hospital for the Insane and grandson of Dr. James Steuart, a graduate of Edinburgh University. Dr. Steuart graduated in medicine from the University of Maryland in 1850. From 1850 to 1854 he was physician to the Baltimore General Dispensary and from 1854 to 1861 assistant physician at the Maryland Hospital for the Insane. From 1873 to 1889 he was health commissioner of Baltimore, and by his energy was instrumental in arresting several threatened epidemics of smallpox and yellow fever. He was secretary of the State Board of Health from 1894 to 1897. He was surgeon to the First Maryland Infantry, a member of the American Public Health Association and of the Medical and Chirurgical Faculty of Maryland.

John P. Wood, M.D. Transylvania University Medical Department, Lexington, Ky., 1828, the oldest practicing physician in the United States, if not in the world, of Coffeeville, Kan., died at the home of his brother in Thomas, Okla., March 28, from paralysis, after an illness of one week, aged 101 years, 2 months and 24 days. Dr. Wood served as surgeon of Henry Clay's regiment in the Mexican War, in which he was seriously wounded. At the close of the war he settled in Danville, Ill., and in 1853 moved to Kansas.

Goronwy Owen, M.D. University of Pennsylvania, Philadelphia, 1857, professor of obstetrics and diseases of women and children, Medical College of Alabama, a surgeon in the Confederate Army during the Civil War, a recognized authority on obstetrics, died at his home in Mobile, March 30, from paralysis, aged 69.

Frank Van Schoiack, M.D. University Medical College, Kansas City, Mo., 1901, for many years at Ottawa, Kan., more recently at Ponca City, Okla., died recently at the latter place, from pulmonary tuberculosis, following pneumonia.

James Jones Singer, M.D. Jefferson Medical College, Philadelphia, 1871, for 26 years surgeon of the Baltimore and Ohio Railway at Connellsville, Pa., died at his home in that place, March 28, after a long illness, aged 53.

Donald Gilbert Gordon, M.D. Trinity Medical College, Toronto, 1886, professor of hygiene in Trinity Medical College, died at Church Home Hospital, Baltimore, March 28, aged 44, of tubercular peritonitis.

Walter S. Leaming, M.D. Jefferson Medical College, Philadelphia, 1882, postmaster of Cape May, N. J., formerly state assemblyman and senator, died at his home in Cape May, March 30, aged 48.

Richard **Johnson, M.D.** Harvard University Medical School, Boston, 1865, ex-president Prince Edward Island Medical Society, died suddenly a few days ago at his home in Charlottetown, P. E. I.

George **B. Mott, M.D.** College of Physicians and Surgeons of Ontario, Toronto, 1869, who practiced for a number of years at Petrolea, Ont., died at Wallaceburg, Ont., January 17.

W. **Frank Lee, M.D.** Kansas City (Mo.) Medical College, 1900, of Beatrice, Neb., died at Las Cruces, N. M., March 23, from tuberculosis, after a long illness, aged 26.

Andrew **Halliday, M.B.** Glasgow University, 1891, associate professor of pathology in the Halifax Medical College, died at Halifax, from tuberculosis, March 10, aged 36.

George **H. Perrin, M.D.** University of Maryland, Baltimore, 1895, died from diabetes, March 30, at his home in Durand, Mich., after an illness of one month, aged 35.

David **H. Stever, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1876, died from pneumonia, at his home in Fairfield, Iowa, March 26, after a short illness.

Robert **M. Bostwick, M.D.** University of Louisville, 1857, a veteran of the Civil War, died at his home in Memphis, Tenn., March 28, after a brief illness, aged 69.

William **H. Tutt, M.D.** Kentucky School of Medicine, Louisville, 1890, of Campton, Ky., died from paralysis at Jackson, Ky., after a short illness, March 31.

Robert **M. Cooper, M.D.** Western University Medical Department, London, Ont., 1889, of London, Ont., died suddenly, March 21, from epilepsy, aged 33.

George **Stewart, M.D.** University of the Victoria College, Cobourg, Ont., 1869, of Port Rowan, Ont., died January 28, from apoplexy, aged 62.

A. **M. F. Hawkins, M.D.** Atlanta (Ga.) Medical College, 1876, died at his home in Ball Ground, Ga., March 29, from pyemia, after a short illness.

Kenneth **D. McKenzie, M.D.** Halifax (N. S.) Medical College, 1887, Medical Health Officer of St. Johns, Newfoundland, died December 24, 1902.

Alvin **W. Tyler, M.D.** St. Louis Medical College, 1878, died at his home in Tulare, Cal., March 18, from heart disease, aged 71.

Deaths Abroad.

Dr. **Salomon,** vice-president of the Union des Syndicats Médicaux de France and author of a number of works on trade intoxications, etc., died at Savigné.

J. **Deutsch, M.D.,** publisher of the "Aerztliche Zentralzeitung at Vienna.——**Dr. J. Gine y Partagas,** professor of pathology at Barcelona.——**Dr. Didiot,** formerly chief of the French military sanitary department.

E. **Bottini, M.D.,** Pavia, professor of surgery at Pavia and senator of Italy, died at his villa at San Remo, March 11, aged 66. His family is indissolubly connected with the Bottini operation, and he was one of the most advanced surgeons of his day and country.

G. **Bouilly, M.D.,** professor agrégé of surgery at Paris, died in that city, March 14, aged 55. He had the reputation of being the busiest surgeon in Paris, and was appointed president of the Société de Chirurgie last year. Abdominal surgery and gynecology were his specialties and he was a frequent contributor to medical periodicals devoted to these branches.

Miscellany.

Hydrophobia.—From the extended comment recently in the public press one might infer that there was a genuine epidemic of rabies in New York City. Such is not the case, although special attention has been directed to the fact that this disease is present at all seasons by the recent sad death of Dr. H. P. Loomis' child. According to the statistics of the health department, there have been, on an average, in recent years about 7 deaths annually from hydrophobia. On the other hand, Dr. H. D. Gill, a veterinary surgeon, asserts that the dumb form of rabies is quite common among animals, and that unless it happens that a person has been bitten by an animal so affected the case does not come to the notice of the board of health laboratory. He finds that about a dozen cases of rabies were observed in the past year by each of several well-known veterinarians. Because of the rarity of the disease in the human being very few physicians have had an opportunity of becoming familiar with its symptomatology. To facilitate the detection of rabies in dogs Dr. Gill offers the following suggestions:

> Beware of a dog when it becomes dull and hides away; appears restless; always on the move and prowling; whose countenance is sombre and sullen; walks with head down like a bear. Beware of one who barks at nothing when all around is still. Beware of a dog that scrapes incessantly and tears up things. Look out for the dog which has become too fond of you and is continually trying to lick your hand and face. Beware above all of the dog which has difficulty in swallowing, which appears to have a bone in its throat, and one that has wandered from home and returns covered with dirt, exhausted and miserable.

It is generally agreed, says Dr. Gill, among physicians who have studied the subject, that the disease is readily controlled by the enforcement of a muzzling ordinance, but unfortunately the control of dogs in New York City is in the hands of the Society for the Prevention of Cruelty to Animals, whose president declares that, in his large experience of thirty years, he has not seen a single case of rabies, and that muzzling a dog makes him sick and cross and much more likely to bite.

American Medical Temperance Association.—The twelfth annual meeting of this association will be held in New Orleans, May 6 and 7, 1903, each session beginning at 9 a. m. An address will be given by the honorary president, Dr. N. S. Davis, Chicago, and the annual address by the president, Dr. Winfield S. Hall, Chicago. Papers will be read by Dr. H. O. Marcy, Boston; H. D. Didama, Syracuse, N. Y.; J. W. Grosvenor, Buffalo, N. Y.; T. D. Crothers, Hartford, Conn.; T. A. MacNichol, New York; C. E. Stewart, Battle Creek, Mich.; John Madden, Milwaukee, Wis.; D. S. Reynolds, Louisville, Ky., and others. This association was organized in Washington, May 7, 1891, and holds its annual meeting at the same time and place as the American Medical Association. The following extract from the constitution of the Association will indicate its plan and purposes:

> The object of this association is to encourage and promote the clinical, therapeutic, pharmacologic, and chemical study of alcohol in health and disease. It also aims to gather, compile, and make available the studies and experiences of medical men in all parts of the country concerning the use of alcohol and to formulate such definite facts as can be utilized and made available in the practice of medicine. It is assumed that all physicians interested in the study of alcohol should approach it from the scientific side alone, unbiased by any personal considerations of custom or habit, and with no object other than to ascertain the facts concerning this question irrespective of all possible conclusions. This is the spirit and purpose of the association, and it is entirely independent of any other object except the purely scientific question of the nature and character of alcohol.

All regular practitioners of medicine may become members by making application to the secretary. It will be evident to every one that the field of this association is rapidly widening and the demand for studies in this direction is constantly increasing. A very cordial invitation is extended to all persons interested in this subject to unite with this organization and lift the whole subject out of the plane of quackery into the atmosphere of clear science. All communications addressed to the secretary, T. D. Crothers, M.D., Hartford, Conn., will receive prompt attention.

CLIPPINGS FROM LAY EXCHANGES.

Easter Lays.

MASSAGERY IS GOOD.

"Dr. —— has removed her massagery and beautifying business to Chicago, where a wider field awaits her."—"Monroe (Wis.) Sentinel."

WANTED—A DOCTOR TO BURY.

"We are hoping a lively hustling 'Doc.' will settle in our township. Our much lamented citizen Doc —— was buried over a year ago and we think it a good place for one."—Tylersville Topics, "Oneida (N. Y.) Despatch."

GASTRIC VISCERA RUPTURED.

"August —— was kicked in the abdomen by a horse on Tuesday and is in grave danger of losing his life. . . . A severe rupture of the internal organs of the stomach is feared and an operation will be necessary."—"Denver Times."

WHY NOT RIDE?

"Dr. ——, we understand, has been made a member of the International Medical Congress, which meets in Madrid, Spain, in April. The doctor says he will be unable to go, on account of the bad condition of the roads."—"Tell City (Ind.) Journal," March 18, 1903.

PIE BACTERIOLOGY.

"Dr. Klein is an expert on the Government Medical Board. After investigating pies on behalf of the Government he reports: 'All contained the spores of anacrobic non-pathagenic bacillus balyricus, the spores of bacillus mesentericus vulgatus and slaphylococcus albus of at least two different kinds.'"—"Wilmington (Del.) Republican."

IMPORTED FÆCES, ET AL.

The program of the twenty-eighth semi-annual meeting of the District Medical Society of Central Illinois, as published in the "Jacksonville (Ill.) Courier," Oct. 30, 1902, contains the following interesting titles of papers: "Estilogg of Typhoid Fever; Saconea; Serrectory Neuroses of the Stomach; Prostatecromy; Leukemia and Peseudo Lukemia; Imported Fæces; Theuterine Curelte; Notes from New York Roby Clinic."

COMPLETE GASTRO-ENTERECTOMY.

In a report of a gunshot-wound case, the "Norfolk (Va.) Despatch" thus describes the operation. . . . "The stomach and bowels were taken completely out of the negro, all of the food was taken from the stomach and the perferaations in it dressed. The stomach was then put back in the body and the incission through which it was taken out stitched up, leaving a short opening through which the wound might be allowed to bleed."

FOREIGN BODIES IN THE LEGS.

The following advertisement appeared in the "Westminster Gazette," last September: "An aged Gentleman (widower, no children) will be requiring soon an experienced Pensioned Army or Navy Valet. His health is perfectly good, but he has been severely injured by the upsetting of an express train in his legs. He wishes help when he gets out of his bath, and dresses, and also in undressing at night. Any applicant must be a member of the Church of England, and state whether married or single.—Apply, &c."

PULMONARY JERKS.

"Shot Through Air with Bullet's Speed—Man's Lungs Were Jerked From Their Fastenings—Pneumonia Developed in Few Hours—Victim Lives. The condition of —— who fell from . . . railway train . . . presents an interesting study. . . . The young man was injured internally and in an extremely unusual way. His lungs were literally torn from their fastenings, besides other injuries received. . . . His frontal bone was fractured. . . . In addition . . . his inner organism was badly shocked, particularly his lungs."—"Atlanta (Ga.) Journal."

NATIONAL MEDICINE AND FOOD BUREAU.

Proposed to Secure Pure and Honest Drugs, Chemicals and Foodstuffs.

The following statement in regard to the proposed National Bureau of Medicines and Foods has been sent us by those who have been giving the matter thought: The subject will be brought before the House of Delegates of the American Medical Association at New Orleans by a provisional committee appointed for the purpose of enquiring into the subject. The committee consists of Drs. E. Eliot Harris, New York; Solomon Solis Cohen, Philadelphia; N. S. Davis, Jr., Chicago; H. Bert Ellis, Los Angeles, and Philip Mills Jones, San Francisco.

The idea of establishing a board of qualified experts who should represent the interests and the support of the professions of medicine and pharmacy, and through the medium of such a board secure: 1. More general conformity to the standards of the pharmocopeia; 2, drugs, chemicals and foodstuffs that will be actually as labeled and can be relied on; and 3, deal in a proper professional and ethical manner with the large and ever-increasing number of proprietary preparations and mixtures that are being presented to the medical profession, was first suggested by Dr. F. E. Stewart at the meeting of the American Medical Association in 1881.

This idea has been elaborated and plans have been formulated which it is thought will secure the objects desired. These plans have been approved by a number of representative manufacturers, physicians and pharmacists, and it is evident that if the professional interests and the people of this country (and especially the members of the American Medical and the American Pharmaceutical Associations) really desire relief from the present unfortunate and distressing condition of materia medica and pharmacy, and of adulterated and dishonest foodstuffs, such relief is at hand.

Primarily, this plan contemplates the voluntary association of honest manufacturers and pharmacists who will agree with the board of experts representing pharmacy and medicine, on standards of identity, purity, quality and strength, to which their products shall comply, and will further agree to carry out these standards and to comply with the necessary rules governing manufacture, etc.

Organization for the purposes indicated will be begun by the formation of a corporation on the membership plan—no stock issued and not for profit—under the name of the National Bureau of Medicines and Foods, and all the members of the American Medical and the American Pharmaceutical Associations are made members of this bureau. It is proposed that the board of directors governing this bureau be elected by these two associations, each having five directors, one from each association retiring annually and a successor elected for five years.

In order to indicate to the physician, the pharmacist or the purchaser such articles as comply with the standards of identity, purity, quality and strength, and may, in consequence, be relied on to conform truthfully with the labels affixed, and also to reward the honest manufacturer and pharmacist for his honesty and aid him in competition with dishonest or impure products, those manufacturers and pharmacists who affiliate with the bureau in this work will be authorized to print on the label of such of their products as are placed under the supervision of this bureau a certificate of identity, purity, quality and strength, of a form to be indicated by the board of directors.

All possible precautions in the way of frequent inspection, analysis or assay will be taken by the bureau in order to keep certified products up to the standard and to protect the bureau certificate from fraud. In addition to the original analysis of each "batch," every article bearing the bureau certificate will be purchased in open market from time to time and submitted to analysis, assay or comparison with standard samples.

The bureau will also gather and diffuse reliable information relative to materia medica products, chemicals and foodstuffs and to those who manufacture or deal in the same, and it is believed that in a comparatively short time such information will replace and do away with the one-sided and unreliable trade literature, which is at present, in many instances, the only available source of information.

The work of the bureau will be purely commendatory and not in any way condemnatory, so that it can in no event become an agent of blackmail.

As the bureau is not a commercial enterprise, is not organized for profit nor for money making, only the actual expense of doing the work required will have to be defrayed. It is proposed to assess this actual cost on the various manufacturers and producers whose goods are certified by the bureau, each in proportion to the amount and value of the goods so certified. This feature of the plan has been considered satisfactory by those who have signified a willingness to affiliate with the bureau.

In addition to the two associations already mentioned, any scientific society that may vote to affiliate with the bureau may do so, and its members then become members of the bureau; and, further, any person who so desires or who is willing to signify his approval of the aims and objects of the bureau, may become a member on the payment of $1 per year.

CERTIFICATE OF INCORPORATION.

We, the undersigned, all being persons of full age, and at least two-thirds being citizens of the United States, and at least one of us a resident of the State of New York, desiring to form a corporation, pursuant to the provisions of the Membership Corporations Law of the State of New York, do hereby make, acknowledge and file this certificate for that purpose, as follows:

First. The particular object for which this corporation is to be created is: To determine on and fix standards of identity, purity,

quality and strength and to secure adherence to prescribed formulas of all drugs, chemicals, foodstuffs, and of all articles intended for use in the arts and sciences or for human consumption; to diffuse accurate and reliable information as to such articles, preparations or products and as to those making or dealing in the same; to procure uniformity and certainty in the customs, usages and methods of manufacture of those engaged in the foregoing or allied trades; to supervise the manufacture, preparation or production and distribution by its members of all commodities, articles or preparations mentioned, and, on sufficient evidence that the standards of identity, purity, quality and strength, as well as adherence to prescribed formulas have been maintained, and that all requirements for manufacture, preparation or production, as set forth in the by-laws, rules or regulations made and provided have been complied with by the member manufacturing, preparing, producing or distributing such commodities, articles or preparations, to issue to such member a certificate of identity, purity, quality or strength and compliance with prescribed formulas, which certificate shall be of the form and nature and shall be used in the manner set forth in the by-laws, rules or regulations for that purpose made and provided; provided, however, that no medicinal preparation shall be so certified unless the formula, couched in the ordinary terms of chemistry and pharmacy, and giving the qualities of the active ingredients, shall have been or shall be published; to settle differences between its members, and to promote a more friendly intercourse between business men and between its members; to aid, stimulate and encourage research, investigation and study that will tend to enlarge, improve or increase and diffuse knowledge and information of materia medica, chemistry, pharmacy, pharmacology, pharmacognosis, pharmacodynamics, therapeutics and all arts and sciences allied thereto.

Second. The name of the proposed corporation is the "National Bureau of Medicines and Foods."

Third. Its principal office is to be situated in the City of New York.

Fourth. The number of its directors shall be ten.

Fifth. The names and places of residence of those persons to be its directors until its first annual meeting are as follows:

Sixth. The annual meeting shall be held on the ————.

Book Notices.

THE PROCEEDINGS OF THE CHARAKA CLUB. Volume I. 8vo. Pp. 97. Price, $3.50 net. Printed for the Club by William R. Jenkins. New York: William Wood & Co. 1902. Limited Edition.

One of the most select clubs of which we have read was the X Club founded in 1864 and which existed for twenty-nine years. It consisted of Huxley, who was responsible for its creation; George Burk, secretary of the Linnear Society, and at one time president of the Royal College of Surgeons; Edward Frankland, the chemist; Hirst, the mathematician; J. D. Hooker, the great botanist; Sir John Lubbock, William Spottiswood, Herbert Spencer and John Tyndall.

These nine at one time tried to elect a tenth member, but failed, hence probably it was called the X Club. Huxley called it a scientific caucus or ring, but that it had no raison d'être beyond the personal attachment of its original members.

The Charaka Club goes the X Club one better, as far as the number of members is concerned, for it has ten. They are Drs. Pearce Bailey, John S. Billings, John Winters Brannan, Joseph Collins, L. Dana, Arpad G. Gerster, Ward A. Holden, Frederick Peterson, B. Sachs and George F. Shrady, with one lonesome honorary member, William Osler. The raison d'être is "a number of medical men of this city who were interested in the literary, artistic and historic aspects of medicine, and who hoped to find some recreation, if not profit, in dealing with this, the less serious, side of their art," concluded to be a club. We are not told that one of the objects is the publication of books, but its first venture in this line is before us, and it is something of which its members may be proud, not alone for its value from the literary viewpoint; but for its uniqueness and for its typographic make-up.

The first article is on Hindoo Medicine. In this Dr. Sachs tells us about the medicine of the Hindoos, and presents a very interesting, although brief, account of our professional Indian brethren of long ago. The club was named after one of the Hindoo medical writers, Charaka, whose work is still extant and from which Sachs quotes freely. Three poems by Peterson follow, one on "Heredity," one on "Environment," and one on "Solitude." A. G. Gerster writes "On the Hippocratic Doctrine of the Injuries of the Cranium." Dr. Dana tells us about Æsculapius, giving a biographic sketch, as it were, "correctly as anything not the least true can be correct." This article is accompanied with fifteen full-page plates illustrating the statues, etc., of the God of Medicine, together with a double-page plate showing "The Hieron, or Sacred Grove," and two half-page plates of the Temple of Æsculapius at Epidauros. Dr. Dana also writes very entertainingly of "The Evil Spoken of Physicians," and makes some happy quotations. He thinks that our profession is not deserving or receiving as many gibes as has been the case in the past.

Dr. Collins makes two contributions: one about a man who was in love with his typewriter, and didn't know it. He wanted Collins to hypnotize her, and although he, Collins, cruelly refused to do so, nevertheless charged him for doing it. The other contribution is also a story of love, but not a love story, and bears the title "A Contribution to Ethics."

"The Ophthalmology of the Greeks," by Dr. W. A. Holden closes.

The book is issued in a limited edition, of which only 257 copies are for sale.

TWENTIETH CENTURY PRACTICES. An International Encyclopedia of Modern Medical Science, by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. Volume XXI. Supplement. Cloth. Pp. 845. Price, $5.00. New York: Wm. Wood & Co. 1903.

While only two years have elapsed since the completion of this series the advances have been sufficiently marked in many branches in medicine as to justify already a supplementary volume. In this one the articles have been prepared by men of first-class standing, Europe as well as America being liberally drawn on. As instances of this we may note Carl Beck on the Roentgen ray, Reginald Harrison on kidney disorders, Lydston on prostatic and urethral diseases, von Noorden on diabetes, Allen on skin diseases, Einhorn on diseases of the stomach, Vaughan on ptomains, toxins, etc., Sternberg on yellow fever, Shiga on bacillus dysentery, Babes on tetanus, etc., etc. Everyone who possesses the original series will want this volume as a compendium of the best data that have been accumulated since the beginning of its appearance and those who have not, will find it, in the main, an excellent statement of the progress of medicine during the past few years. One or two of the articles are almost too brief to be satisfactory, as that of Blandford on insanity, which touches only on the question of the autotoxic theory of Ford Robertson. There has been more progress even in this much abused subject that might have been noticed. The work is beautifully gotten up and elegantly illustrated.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M.D., New York City. Volume V. Illustrated by Chromolithographs and 576 Half-tone and Wood Engravings. Cloth. Pp. 873. Price, $7.00. New York: Wm. Wood & Co. 1902.

This fifth volume of the new edition of Wood's Handbook is one of the best that has appeared. Besides a series of articles on subjects which form in themselves a very valuable composite text-book, it contains many other valuable monographs, such as that on the larynx by Makuen, on the liver by Musser, on the lymphatic system by Gage, on milk by Kober, and a vast number of others equally worthy of notice, but which, from their very number, prevent specification.

Association News.

ENTERTAINMENTS AT NEW ORLEANS.

PROVISIONAL LIST OF EVENTS ARRANGED BY THE ENTERTAINMENT COMMITTEE.

From the "New Orleans Picayune" of April 1 we clip the following paragraphs:

Tuesday, May 5, in the evening, there will be a reception at the Palm Garden of the St. Charles Hotel which will cost about $1,000, exclusive of the music. The object is that the visiting physicians and ladies shall become acquainted with New Orleans people and that the ladies of the city shall assist in receiving. The reception will last from 5 to 7.

On Wednesday two large private receptions will be given, one an afternoon tea and one at night. On Thursday there will be a grand fête champêtre at the City Park, with music and refreshments, and on Friday there will be a boat ride on the river at which about 2,000 people will be entertained, and the ride will end at 6 p. m. and finish the social features of the convention.

There will be at the fête champêtre brilliant illuminations. Skiffs will be lighted with gay lanterns and flit about among the lakes, and the night will be made gaudy with color and pleasure.

Three or four physicians have promised receptions for various sections of the convention.

A trip to Cuba and fishing trips are contemplated.

Mrs. Samuel Delgado has been made chairman of a ladies' committee, and sixty or seventy-five ladies have been asked to serve on

the committee, which will undertake the general charge of the ladies who come with the physicians, at times when they are not at any entertainment given by the Entertainment Committee, and they will supervise entertainments, sightseeing, etc., in the mornings. Notices have been sent to these ladies, and as soon as a sufficient number of answers is received the committee will be called together to discuss plans.

It was reported that Dr. Rudolph Matas will have charge of a smoker for the Section on Surgery at the West End Hotel on Tuesday night. Dr. Dyer will have charge of the reception for the Section on Dermatology, and Dr. De Roaldes for the Section on Laryngology, and Dr. Henry Dickson Bruns that of the Section on Ophthalmology.

Dr. J. D. Bloom intends giving a yacht ride to special guests.

It was decided that all the smokers for the sections be referred to the Chairman, who will refer them to the physicians who will have charge, thus relieving the Banquet Committee, which will have charge of the arrangements of all banquets which sections or organizations desire to give.

Excursions.

The excursions, which are always such an enjoyable feature of the meeting, are briefly mentioned on page 1047 of this issue. Especial attention is called to the trip to San Antonio, because that city was a candidate last year for the privilege of entertaining the Association in 1903. Doubtless many will wish to take this trip through the oil and rice fields of Louisiana and Texas to the historic, quaint and beautiful city of San Antonio.

REGISTRATION OF MEMBERS.

The registration of members at the annual session is always a simple matter to those who understand what is required.

Those registering come under one of three classes, 1, those who have already paid the annual dues for the current year; 2, those who have not paid the dues, and 3, those who join the Association at the session.

1. Those who have paid for the current year—and these have the least trouble—have been supplied with a small pocket card to take to the session, which is also a pocket certificate. To register one will fill out a registration card, found at the place of registration, and present this with his pocket card at the indicated window, where he will receive his badges, etc.

2. Those who have not paid their dues will fill out card as above and present it, with the annual dues, at the "Cash" window and receive their badges, etc. (Those who are behind in their dues must pay the back dues as well as those for the current year.)

3. Any one desiring to join the Association must have a certificate showing that the applicant is a member in good standing of an affiliated association in the state in which he resides. He will also fill out the registration card and present it, with his certificate and five dollars, at the window marked "New Members."

RAILROAD RATES.

SUMMARY OF THE TRANSPORTATION ARRANGEMENTS FROM ALL POINTS OF THE COUNTRY.

A résumé of the announcements that have been made from time to time in THE JOURNAL concerning transportation to New Orleans will show the following facts for the guidance of those who will attend the session: One fare for the round trip has been granted by the South Eastern, South Western and Central Passenger Associations, and also by roads covering a portion of the Western Passenger Association. This territory comprises Louisiana, Texas, Oklahoma, Indian Territory, Arkansas, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Tennessee, Virginia, Kentucky, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, and a portion of West Virginia, S. Dakota and Kansas.

From all western states not mentioned above, the regular summer excursion arrangements will prevail. From the eastern and New England states not mentioned, those who attend the session will have to pay a fare and a third rate in New England and the regular excursion rates through New York and Pennsylvania. This will take them to Washington or to Pittsburg or to Charleston, W. Va., or to such other point at which they will enter the Central or South Eastern Passenger Association territory. From these points on to New Orleans, half fare for the round trip will be the rate.

As a further guide to indicate the railroad expenses, we give the following rates for the round trip from some principal cities of the United States:

Austin, Tex.	$17.80	St. Augustine, Fla.	$20.60
El Paso	31.90	Cincinnati	21.00
St. Paul	34.00	New York City	37.50
Minneapolis	34.00	Philadelphia	33.50
Chicago	23.00	Pittsburg	29 35
Omaha	29.50	Indianapolis	22.25
St. Louis	18.00	Nashville, Tenn.	16.75
Des Moines	27.85	Cleveland	28.25
Sioux Falls, S. D.	34.84	Baltimore	29.50
Buffalo	31.85	Washington	27.50
Boston	42.15	Louisville	19.00
Richmond, Va.	26.50	Evansville, Ind.	17.75

Extension of Limit of Ticket.

The regulations governing the round-trip-for-one-fare rate are as follows:

RATE.—One lowest regular first-class tariff (not temporarily reduced) fare to New Orleans and return.

DATES OF SALE.—Tickets to be sold on May 1-4, inclusive.

LIMIT OF TICKET.—Tickets to bear final limit of ten days from date of sale, except that by depositing tickets with joint agent not later than May 12, 1903, and on payment of fee of fifty cents at time of deposit, final limit may be extended up to and including May 30, 1903. Tickets to be limited for continuous passage in each direction, going trip to commence date of sale and return trip date of execution.

FORM OF TICKET.—Ironclad signature form of ticket to be used, providing for punch description of passenger going and return transit limits and execution by agent limit by depositing tickets with joint agent and payment of terminal line at New Orleans, also for extension of fee of fifty cents at time of deposit. Exchange orders must also require execution at New Orleans.

JOINT AGENCY.—The joint agency for deposit and extension of tickets will be located in Room 204, No. 204 Camp Street. The agency will be open from 8.00 a. m. to 8.00 p. m., and will be conducted in the name of Joseph Richardson, special agent. Tickets must be deposited personally by original purchaser. Tickets will be extended by means of an extension paster printed of perfect safety paper of the American Association of General Passenger and Ticket Agents, the signature of special agent, Mr. Richardson, being affixed by means of facsimile embossing stamp.

CONNECTING LINES.—The above rate and arrangement to be tendered to connecting lines for basing purposes. The sale of tickets or exchange orders to be so regulated as to require presentation at our gateways on the dates of sale authorized therefrom.

SPECIAL TRAINS.

LIST OF SPECIAL TRAINS FROM VARIOUS POINTS TO NEW ORLEANS.

CHICAGO.—The Chicago Medical Society is making arrangements with the Illinois Central to run a special train to New Orleans. The time of departure is expected to be about 12 o'clock noon, Sunday, May 3. The train will be a fully equipped and most comfortable one. Exact announcement will be made later. Those who find Chicago on their route to the session are invited to join this party. The train will also take on members from points along the line at which the train stops.

NEW YORK AND PHILADELPHIA.—A special train over the Southern Railway will leave New York City Saturday, May 2, at 4:25 p. m. and Philadelphia at 6:55 p. m. going to New Orleans, via Washington, Atlanta and Montgomery. The train will be composed exclusively of Pullman, dining, drawing room, sleeping, library and observation cars. Those desiring Pullman reservation should send in their names as soon as possible to Dr. F. H. Wiggin, 55 W. Thirty-sixth Street, New York City, or to agents of the Southern Railway.

Another train is planned over the New York and New Orleans Short Line. If enough do not reserve accommodation to warrant a special train, special cars will be used on a regular train, since many members have reserved berths. The majority of these will leave New York 3:25 p. m., Philadelphia 6:05 p. m. and Washington 10:01 p. m., May 2. The route is via Wash-

ington, Lynchburg, and Chattanooga. Further details and reservation of berths may be had from Eastern Passenger Agent L. J. Ellis, 398 Broadway, New York.

ST. LOUIS.—A special train will leave St. Louis via the Illinois Central, Sunday, May 3, at 2:44 p. m. This train will be made up of sections from Chicago, Omaha, Des Moines and perhaps other points and will consist of Pullman palace cars, diners and the other equipments of comfortable travel. Further information and reservation of berths from St. Louis may be obtained from C. C. McCarty, 308 N. Broadway, St. Louis.

OMAHA.—The delegation from Omaha may obtain further information from Dr. W. H. Brill, Omaha.

ST. JOSEPH.—Those desiring to join the party from St. Joseph or vicinity should write Dr. Chas. Wood Fassett, St. Joseph, Mo.

DES MOINES.—Arrangements, as mentioned above, have been made for the Iowa contingent to travel together over the Wabash, leaving Des Moines Saturday evening, May 2, arriving in St. Louis Sunday morning, where they will join the other delegations and spend the morning in St. Louis. Further details may be had of Dr. J. W. Cokenower, Des Moines.

INDIANAPOLIS.—The Hoosier special via the Big Four and Illinois Central railways will leave Indianapolis for New Orleans, by way of St. Louis, at 3:25 p. m., Sunday, May 3. This train will arrive at New Orleans early next morning. Requests for reservations of berths may be sent to Dr. J. F. Barnhill, 144 N. Penn Avenue, Indianapolis. A large delegation from Indianapolis is already made up.

DETROIT.—A special train or else special cars on a regular train will run from Detroit to Cincinnati, where it will connect with the Q. and C. train mentioned in the next paragraph. Information may be had from Dr. A. P. Biddle, Detroit.

CINCINNATI.—The Queen and Crescent Route will carry a special party from Cincinnati to New Orleans. We have been sent no details of the Detroit and Cincinnati excursions.

KANSAS CITY.—A party is being made up of physicians from Kansas City, perhaps including Omaha, Lincoln, Sioux City and St. Joseph physicians, who will have special cars attached to the Southeastern Limited of the 'Frisco system, leaving Kansas City Sunday, May 3, 6:30 p. m., via Memphis, 8 a. m. Monday, arriving in New Orleans Monday, May 4, at 7:40 p. m. Berths should be reserved early. Address Dr. J. V. Greene, 317 Rialto building, Kansas City, or reserve through agents of the 'Frisco System. The Omaha passenger agent is W. C. Melville, 205 S. 14th Street, Omaha. This route gives a daylight trip from Memphis to New Orleans.

LOUISVILLE—Special Pullman service has been arranged to New Orleans, via the Illinois Central Railroad from Louisville, Ky., and vicinity. Special arrangements have been made for connections between parties from Cincinnati, Evansville and Indianapolis (via the Big Four route), and the party from Louisville at Fulton, from thence proceeding as one train on the Illinois Central. The special party will leave Louisville at 12:55 p. m., May 4, arriving in New Orleans at 11 o'clock the next morning, but those who desire to reach New Orleans at an earlier date may do so, tickets being on sale from the last day of April at the reduced fare of one fare for the round trip. The advantages of making the trip in company with a congenial party are obvious, and it is hoped the delegates and members will join this party. Sleeper reservations can be made by addressing Dr. Henry Enos Tuley, 111 W. Kentucky Street, Louisville, Ky.

The New St. Charles Hotel.

WATER ROUTES TO NEW ORLEANS.

ATLANTIC OCEAN TRIP DETAILS—NO MISSISSIPPI RIVER ARRANGEMENT.

The Southern Pacific line of passenger steamers (5,000 tonnage) between New York and New Orleans has made the rate of $50 round trip or $60 to go one way by rail and one way by water. Tickets will be good for three months, and this rate will apply to ships leaving New York April 18 and 25. The time in transit by water is about five days. The rates include room and board. The dates of return from New Orleans are May 6 and 13 at 9 a. m., and every seven days thereafter. This will be an opportunity for members to go by rail May 1 to 4, attend the meeting, take a trip to San Antonio, Texas, or some

other point and then sail for New York May 13. Further particulars may be had of L. H. Nutting, 349 Broadway, New York.

Another route to New Orleans, part land and part water route, is from Boston to Norfolk, Va., by steamer and thence to New Orleans by the Seaboard Air Line. The return will be by the same route. This round trip may be made for $41.75, including meals and stateroom while on steamer. Particulars may be had of C. L. Longsdorf, 360 Washington street, Boston.

The Mississippi River route plan has not materialized. Dr. Otho F. Ball, St. Louis, investigated the matter and reports that the effort to form an excursion on the river had to be abandoned because there seemed to be no direct line of boats in operation. A party may go from some other point, however, if arrangements can be made. We have received a number of requests for information about this route. It is not too early for houseboat parties to float down the river. This method would prove a delightful method of recreation.

BAGGAGE AND HOTELS.

ANNOUNCEMENTS OF NEW ORLEANS BUREAU OF INFORMATION AND OF HOTEL COMMITTEE.

For the convenience of those in attendance at the New Orleans Session the Bureau of Information has arranged with the Parcel Delivery and Express Company to handle baggage. Messengers of this company will be on special trains, but not on regular trains entering New Orleans. Members and others who arrive on the regular trains may, if they wish, keep their checks until their arrival at the Bureau of Information, Washington Artillery Hall, and have their baggage transfer orders made from that point. This company will charge 25 cents for each piece delivered anywhere in the city. The charge of the other principal companies of the city is 50 and 75 cents per piece.

Employment Bureau.

The Bureau of Information's arrangement with New Orleans-Crescent Information and Employment Bureau places the resources of that organization at the service of visitors to New Orleans. Trained clerks, stenographers, bookkeepers and office assistants of every description, they say, will be furnished, baggage insured, river excursions arranged, information given as to Louisiana or other resorts, hotels, etc., and accommodations reserved thereat. We suggest that those desiring stenographers, etc., by having the same engaged in advance, will secure the best service.

Hotels and Boarding Houses.

All the rooms at the St. Charles Hotel have been reserved already. The Committee on Hotels has 5,000 rooms available in other hotels and boarding houses. They recommend that those who wish accommodations write for them in advance, addressing Dr. E. D. Martin, 810 Common street, New Orleans, and stating what sort of accommodations are desired, whether with meals or bath, how far from the meeting places, etc.

SECTION BANQUETS.

ELABORATE PLANS.—ANNOUNCEMENTS.—MENTION OF MISCELLANEOUS MATTERS.

The Section on Diseases of Children will have no Section banquet at New Orleans.

Five or more stereopticons have been provided for the use of different Sections at New Orleans.

The Section on Cutaneous Medicine and Surgery will have a smoker in lieu of a banquet Tuesday, May 5, 1903.

The Fête Champêtre in the City Park, with the elaborate decorations and illuminations and music, will be a grand event.

The National Conference of State Medical Examiners and Licensing Boards will meet on the morning of May 4, at 9:30.

The officers of the Section on Ophthalmology announce a fine program of toasts at their Section banquet, Tuesday evening.

The courtesy of Messrs. Hansell, Teunnisson and Bellocq and Dr. J. A. Storck in furnishing some of the illustrations of New Orleans and vicinity is acknowledged.

Special attention is being given by the New Orleans committee to the matter of a river excursion. Other smaller excursions on Lake Ponchartrain have been arranged.

Dr. F. H. Wiggin, Secretary of the Judicial Council, desires us to announce that the Council will hold a meeting immediately after the adjournment of the first general meeting on Tuesday morning.

Unusual interest is being taken in special trains and in the arranging of parties to make the trip together. This is a delightful feature of each annual session, and members are this year planning to make the most of it.

The courtesies of the Boston Club and the Chess, Checkers and Whist Club have been extended to visiting members of the American Medical Association while in New Orleans. Membership badges will be all that is necessary to obtain admission.

The Section on Obstetrics and Diseases of Women will have a banquet Tuesday evening, to which members of the Association are invited. Plates will be $3. Those desiring to attend the banquet should notify the secretary, Dr. C. S. Bonifield, Cincinnati, as soon as convenient.

Prof. W. Uhthoff of Breslau, Germany, whose writings and work in ophthalmology are well known throughout the world, will be the guest of the Section on Ophthalmology. He is to take part in the work of the Section, and is expected to deliver a short address at the Section banquet.

The dedication of the Louisiana Purchase Exposition at St. Louis by President Roosevelt, April 30 to May 2, is conveniently on the path of many who go to New Orleans and affords an excuse for making St. Louis a rendezvous, from which the special trains should be well filled and a pleasant trip result.

The members of the Committee on Scientific Exhibit are making great efforts to have a creditable exhibit at this session. They announce that some features of the exhibit will be of especial interest and value to the general practitioner, while the specialists are taking much interest in their representations as well.

The officers of the Section on Laryngology and Otology desire that an announcement be made that anyone having anything to exhibit of special interest to laryngologists or to otologists, especially new instruments or apparatus, should communicate at once with the chairman, Dr. George L. Richards, Fall River, Mass., or with the secretary, Dr. J. F. Barnhill, Indianapolis.

The Chairman of the Section on Surgery announces his expectation of a very large attendance. Mikulicz of Breslau will be present and take part in the scientific work. Professor Krause of Berlin has been invited, but on last report it was feared he could not be present, owing to illness in his family, although it is probable that he may attend. Professor Moynihan of Leeds, England, is expected, but no final answer has at this time been received.

SCIENTIFIC EXHIBIT.

THE EXHIBIT OF PATHOLOGIC, PHYSIOLOGIC AND OTHER SPECIMENS AND APPARATUS.

The unavoidable delay incident to the organization of the Committee on Scientific Exhibit has been a serious drawback to the prosecution of the work. Many of those who contributed previously find it impossible this year owing to the limited time remaining. Remoteness of the place of meeting from sources of abundant material has also been urged as an excuse for not participating. There is, however, more than a saving remnant of those, recognizing the great practical value of the work, who are determined that the future of the movement shall not be jeopardized by any lapse at New Orleans. Such have come nobly to the rescue.

Although in the totals presented the showing may not equal that of the two previous meetings, the exhibit will be particularly interesting and instructive, because certain phases of pathology will be fully illuminated. An especial effort will be made to illustrate tropical diseases by means of gross anatomic as well as microscopic demonstrations. This will give to our southern colleagues an opportunity not so well afforded in the north. Such specialization is a natural evolution in the further conduct of the exhibit. Its scope and character will vary from year to year according to the place of meeting and the topics prominently considered in the sections. The committee has made strenuous endeavor to correlate the work of the exhibit with that of the Sections. Some of the officers have entered heartily into co-operation, with the result that we have been assured very complete groups of specimens illustrative of intestinal parasites, bacillary and amebic dysentery, malaria, yellow fever, surgical diseases of the kidney, ectopic pregnancy, fibroid tumors and other topics scheduled on the program.

It is hoped to have these groups demonstrated at stated hours indicated on the published program. In this way the exhibit will become educationally more efficient. The membership of the organization will thus be brought to realize that the exhibit belongs to the whole Association, and that it is not, as many are prone to suppose, merely an adjunct of the Section on Pathology and Physiology.

The local Committee of Arrangements has provided an ample hall for the exhibit, advantageously located and well lighted, in Washington Artillery Hall. Those who contemplate taking exhibits but have not yet made known the fact, should communicate at once with the chairman or nearest member of the committee.

Frank B. Wynn, Indianapolis, chairman; E. R. LeCount, Chicago; Harry T. Marshall, Baltimore; O. L. Pothier, New Orleans; Willard Bartlett, St. Louis, committee.

ASSOCIATION COMMITTEES.

The following list of committees and sub-committees and their officers and members is given here as of interest:

Committee on Award of Association Medal.—Lewis S. McMurtry, Louisville, Ky.; Burnside Foster, St. Paul; M. H. Fussell, Philadelphia.

Committee on Award of N. Senn Medal.—James H. Dunn, Minneapolis; M. L. Harris, Chicago; Floyd W. McRae, Atlanta, Ga.

Committee on Scientific Exhibit.—Frank B. Wynn, Indianapolis; E. R. LeCount, Chicago; Harry T. Marshall, Baltimore; O. L. Pothier, New Orleans; Willard Bartlett, St. Louis.

Committee on Scientific Research.—Alfred Stengel, Philadelphia; William Osler, Baltimore; L. Hektoen, Chicago.

Committee on Organization.—J. N. McCormack, Bowling Green; P. Maxwell Foshay, Cleveland, Ohio; George H. Simmons, Chicago.

Committee on Revision of Code of Ethics—E. Eliot Harris, New York; William H. Welch, Baltimore; T. J. Happel, Nashville, Tenn.; Nicholas Senn, Chicago, and Joseph D. Bryant, New York.

Committee on Reciprocity.—W. L. Rodman, Philadelphia; William H. Welch, Baltimore; Joseph M. Mathews, Louisville, Ky.; Henry Beates, Jr., Philadelphia, and T. J. Murray, Butte, Mont.

Committee on Public Health.—Charles O. Probst, Columbus, Ohio; J. N. Hurty, Indianapolis; W. H. Sanders, Mobile, Ala.; H. A. West, Galveston, Tex., and W. C. Gorgas, U. S. A.

Committee on Medical Education.—Arthur D. Bevan, Chicago; F. W. McRae, Atlanta, Ga.; Rudolph Matas, New Orleans; R. A. Marmion, U. S. N., and C. A. Daugherty, South Bend, Ind.

Committee on Prophylaxis of Syphilis.—Henry D. Holton, Brattleboro, Vt.; George M. Kober, Washington, D. C.; W. H. Sanders, Mobile, Ala.; Ludwig Weiss, New York, secretary; L. D. Bulkley, New York, and Louis E. Schmidt, Chicago.

Committee on Credentials and Registration.—George H. Simmons, Chicago; P. Maxwell Foshay, Cleveland, Ohio, and H. O. Walker, Detroit.

Notice to the Members of the House of Delegates.

The members of the House of Delegates are requested to meet in New Orleans, Monday, May 4, at 2 p. m. This meeting will be informal and no official business can be transacted.

Its purpose is to consider unofficially the business which must be transacted by the House of Delegates and to consider the result of the work of the several committees.

It is believed that this informal meeting on Monday will so fully acquaint the delegates of the work to be done that one meeting each morning will be sufficient to accomplish all the business of the Association. Thus the delegates will be free to attend the afternoon scientific work of the Sections.

FRANK BILLINGS, President.

PRELIMINARY PROGRAMS

Of the Sections of the American Medical Association, New Orleans Session, May 5-8, 1903.

The following lists of papers to be read in the various Sections are preliminary, and the order given is not necessarily to be followed in the official program. The official program will not be ready for distribution till the session.

Write to the secretary of the Section in reference to these programs, and not to THE JOURNAL.

Section on Practice of Medicine.

Chairman, W. S. Thayer, Baltimore; Secretary, James B. McElroy, Stovall, Miss.

Chairman's Address, W. S. Thayer, Baltimore.

The So-called Spotted Fever of the Rocky Mountains, Louis B. Wilson and William Chowning, Minneapolis.

Continued Fever—Neither Malarial nor Typhoid; A Clinical Study, T. J. Happel, Trenton, Tenn.

Typhoid Fever, with Especial Reference to Therapeutic Fasting, R. M. Harbin, Rome, Ga.

Abdominal Pain in Pleurisy and Pneumonia, James B. Herrick, Chicago.

Typhoid Fever at High Altitudes, with Résumé of 600 Cases, J. N. Hall, Denver.

The Diagnosis, Prognosis, and Treatment of Pneumonia, Edward F. Wells, Chicago.

The Boys' Venereal Peril, Ferd. C. Valentine, New York.

The Occurrence of Strongyloides Intestinalis in the United States, M. L. Price, Baltimore.

Uncinariasis in the United States, Allen J. Smith, Galveston, Texas.

Clinical Diagnosis of Intestinal Parasites, with Lantern Demonstration, Charles Wardell Stiles, Washington, D. C.

Treatment of Uncinariasis, Thomas A. Claytor, Washington, D. C.

A Contribution to the Study of Summer Diarrheas of Infancy, J. H. Mason Knox, Baltimore.

Malarial Dysentery, Wm. Britt Burns, Memphis, Tenn.

The Pathology and Clinical History of Amebic Dysentery, H. F. Harris, Atlanta, Ga.

A Study of the Cases of Amebic Dysentery Occurring at the Johns Hopkins Hospital, T. B. Futcher, Baltimore.

Treatment of Acute Dysentery, Jas. M. Anders, Philadelphia.

The Circulatory Element in Acute Disease and Its Treatment, L. F. Bishop, New York.

Sources and Methods of Infection of Typhoid Fever, William H. Welch, Baltimore.

Prophylaxis of Typhoid Fever, J. S. Fulton, Baltimore.

Sources and Methods of Infection of Yellow Fever, James Carroll, U. S. A.

Prophylaxis of Yellow Fever, John Guiteras, Havana, Cuba.

Sources and Methods of Infection of Plague, W. S. Calvert, St. Louis.

Prophylaxis of Plague, Lewellys F. Barker, Chicago.

Arthritis Deformans, Thos. McCrae, Baltimore.

Diabetes Mellitus, Arthur R. Elliott, Chicago.

Heredity as an Etiologic Factor in the Production of Appendicitis, William H. DeWitt, Cincinnati.

Traumatic Pneumonia, William T. English, Pittsburg.

Historical Sketch of the So-called Consumption Cures, J. Edward Stubbert, New York.

Should the Tuberculous Patient Know His Condition? C. P. Ambler, Ashville, N. C.

Clinical Aspects of Tuberculous Peritonitis, Joseph Eichberg, Cincinnati.

Tuberculosis in the Negro, Seale Harris, Union Springs, Ala.

The Passing of Chronic Rheumatism, J. J. Walsh, New York.

Limitations of Non-Surgical Treatment in Obstruction of the Bowels, Joseph Rilus Eastman, Indianapolis.

Hemoglobinuric Fever: Its Etiology and Treatment, Walter Shropshire, Yoakum, Texas.

Southern Fevers, Wm. Krauss, Memphis, Tenn.

The Nature of Scurvy, Robert B. Preble, Chicago.

The Restorative Influence of Ozone on the Blood, G. Lenox Curtis, New York.

Section on Obstetrics and Diseases of Women.

Chairman, A. Palmer Dudley, New York; Secretary, C. L. Bonifield, 432 W. 4th Street, Cincinnati.

Chairman's Address, A. Palmer Dudley.

The Advisability of Vaginal Explorative Puncture and and Celiotomy in Cases of Doubtful Diagnosis in Diseases of the Female Genital Organs, with a Report of Three Instructive Cases: (A) Round Cell Sarcoma of Ovary; (B) Infected Retrouterine Hematocele; (C) Pelvic Abscess and Pyosalpinx, C. O. Thienhaus, Milwaukee, Wis.

The Exclusive Use of Electrothermic Hemostasis in Abdominal Surgery, J. W. Keefe, Providence, R. I.

Non-Absorbent Gauze: The Proper Material for Tamponades for Hemorrhage, with Special Reference to Obstetrics, Rudolph W. Holmes, Chicago.

The Technic of Cataphoric Sterilization in Cancer of the Cervix Uteri, G. B. Massey, Philadelphia.

The Repair of Cystocele by Utilization of the Anatomically-Fixed Points in the Anterior Vaginal Wall, E. Reynolds, Boston.

Laceration of the Cervix; When Shall They Be Repaired? Daniel H. Craig, Boston.

A Further Report on Operations on the Uterosacral and Round Ligaments for Retroversion of the Uterus, J. Wesley Bovée, Washington, D. C.

Retroversion of the Uterus; A Clinical Study of the Symptoms, Complications and Treatment, L. H. Dunning, Indianapolis.

Pathologic Exhibit, one hour.

Gastric Ulcer: Some Clinical, Pathologic and Surgical Phases, A. H. Cordier, Kansas City, Mo.

Appendectomy from the Standpoint of the Gynecologist, H. P. Newman, Chicago.

Relation of Appendicitis to Pelvic Disease, F. H. Wiggin, New York.

A Consideration of the Various Methods of Hysterectomy for Myomata, Thos. B. Eastman, Indianapolis.

Sarcomatous Degeneration of Myomata, T. S. Cullen, Baltimore.

Calcification of Uterine Myoma; An Unusual Case, W. H. Humiston, Cleveland.

Ectopic Gestation: Inhibited Tubal Peristalsis a Cause; Report of a Case, with Remarks, O. G. Pfaff, Indianapolis.

The Vaginal Incision in Septic Cases of Abortion, Hunter Robb, Cleveland.

Acute General Staphylococcus Infection Through the Puerperal Breast, W. P. Manton, Detroit.

Shall We Remove the Uterus When It Is Necessary to Remove Double Pus Tubes? C. C. Frederick, Buffalo.

Improved Technic of the Author's Operation for Suprapubic Colohysterectomy for Carcinoma of Cervix, X. O. Werder, Pittsburg.

Transplantation of the Ovaries, F. H. Martin, Chicago.

Typhoid Perforation, W. D. Haggard, Nashville.

Fixation of the Prolapsed Kidney, A. H. Goelet, New York.

Infected Gall Bladder Contents with or without Gallstones, E. W. Ricketts, Cincinnati.

A Combined Clinical and Experimental Study Concerning Peritoneal Saline Infusion, J. C. Clark, Sykesville, Md.

The Early Recognition of Impending Obstetric Accidents, J. B. De Lee, Chicago.

Operations on Diabetics, C. P. Noble, Philadelphia.

The Hygiene of Young Girls, J. H. Carstens, Detroit.

Section on Surgery and Anatomy.

Chairman, James E. Moore, Minneapolis; Secretary, John C. Munro, 173 Beacon Street, Boston.

Time limit of papers, 15 minutes; time limit of discussions, 5 minutes.

If an essayist is not present when his name is called his paper goes to the end of the session's program.

Each paper must be delivered to the secretary immediately after being read.

Sessions will commence promptly at 9:30 a. m. and 2 p. m.

Chairman's Address, James E. Moore, Minneapolis.

Suppression of Urine ;Report of a Case Enduring Five Days, Relieved by Decapsulation of the Kidneys, H. J. Whitacre, Cincinnati.

Fat Necrosis of the Kidney, J. R. Guthrie, Dubuque, Iowa.

Indications and Technic of Nephrectomy, Ramon Guiteras, New York.

The Surgical Treatment of Nephritis, A. H. Ferguson, Chicago.

Indications for Cholecystectomy, B. B. Davis, Omaha.

Cholecystectomy versus Cholecystorrhaphy and Cholecystostomy, F. D. Smythe, Memphis, Tenn.

The Call for Exploratory Operation in the Gall Bladder Region, F. A. Dunsmoor, Minneapolis.

A Contribution to the Surgery of Gastric Ulcer, Van Buren Knott, Sioux City, Iowa.

Surgical Conception of Pyloric Obstruction, H. D. Niles, Salt Lake City.

Surgical Treatment of Gastric Tetany and Gastroptosis, Robert F. Weir, New York.

The Single Cuff Method of Circular Enterorrhaphy: A New Method, O. Beverly Campbell, St. Joseph, Mo.

Intestinal Resection with Report of Fifteen Cases, Nine with the Button and Six with Suture, James H. Dunn, Minneapolis.

Osteomyelitis, Edward H. Nichols, Boston.

Multiple Osteomyelitis, John T. Bottomley, Boston.

The Physiologic Principles Underlying Operations on the Head and Neck, G. W. Crile, Cleveland, Ohio.

Treatment of Vascular Tumors by the Injection of Boiling Water, John A. Wyeth, New York.

Further Experience with the Vertical Overlapping Method for the Radical Cure of Umbilical Hernia, Wm. J. Mayo, Rochester, Minn.

Evolution of the Mammalian Straight Gut, with Special Reference to Peritoneal Changes Incident to Rotation: Illustrated by Dissections and Mechanical Devices, W. T. Eckley, Chicago.

The Value of Enterostomy in Selected Cases of Peritonitis, Fred B. Lund, Boston.

Clinical Observations in Stomach Surgery, A. J. Oschner, Chicago.

Post-Operative Treatment of Gangrenous Appendicitis, Ernest Laplace, Philadelphia.

Dangers Attendant on Attempt at Gaining the Period of Interval in Operation for Appendicitis, Richard H. Gibbons, Scranton, Pa.

The Treatment of Fractures as Indicated by the Roentgen Rays, Carl Beck, New York.

Sunshine and Fresh Air versus Roentgen and Finsen Rays in the Treatment of Tuberculosis of Bones and Joints, De Forest Willard, Philadelphia.

Epithelioma Under the *X*-Ray; A Preliminary Report of the Histologic Changes, J. Clark Stewart, Minneapolis.

Contributions to the Therapy of Surgical and Other Diseases with X-Rays, Rudolph Matas, New Orleans.

The Surgical Treatment of Ascites due to Cirrhosis of the Liver, M. L. Harris, Chicago.

Varix of the Inferior Mesenteric Vein Complicated by Chronic Ulcerative Colitis; Operation, John E. Summers, Jr., Omaha.

Congenital Dislocation of the Radius, Charles A. Powers, Denver.

Acute Epiphysitis of the Head of the Femur, Causing a Condition Subsequently Simulating Congenital Misplacement, John P. Lord, Omaha.

Necessity for more Care in the Treatment of Skull Fractures, W. H. Earles, Milwaukee, Wis.

Epispadias: Report of a Case Treated by a Modification of Caulwell's Operation, James B. Bullitt, Louisville, Ky.

Diverticulum of the Esophagus, A. E. Halstead, Chicago.

Cicatricial Ankylosis of the Jaws; a Contribution to Its Operative Treatment, Rudolph Matas, New Orleans.

Further Contribution to the Surgery of Undescended Testicle, Arthur Dean Bevan, Chicago.

Surgery of the Urinary Tract in the Female, Experimental and Clinical, J. B. Murphy, Chicago.

Consideration of Mammary Cysts in the Early Diagnosis of Breast Tumors, Robert Abbe, New York.

Tuberculosis of the Mammary Gland, A. H. Levings, Milwaukee, Wis.

The Closure of Wounds, Miles F. Porter, Fort Wayne, Ind.

Operative Treatment of Exophthalmic Goiter, T. C. Witherspoon, St. Louis.

Subcutaneous Injections of Paraffin for Deformities of the Nose, F. G. Connell, Leadville, Colo.

Abscess of the Spleen, Walter M. Spear, Rockland, Me.

Stricture of the Esophagus Following Typhoid Fever, Illustrated by Three Cases, James E. Thompson, Galveston, Texas.

A Case of Gas Bacillus Infection, Joseph Ransohoff, Cincinnati.

Section on Hygiene and Sanitary Science.

Chairman, H. M. Bracken, Minneapolis; Secretary, G. T. Swarts, Providence, R. I.

Address of Chairman.

Co-operation Methods for Improving the Usefulness of Statistical Classification of Causes of Death, Cressy L. Wilbur, Lansing, Mich.

Relation of Physicians to Correct Registration of Vital Statistics, W. A. King, Washington, D. C.

Present Status of the Filtration of Water, George W. Fuller, New York.

Drainage, Sewerage and Water Supply of New Orleans, Geo. G. Earl, New Orleans.

Leprosy from a Sanitary Standpoint, Isadore Dyer, New Orleans.

Tent Life in the Treatment of Pulmonary Tuberculosis, R. W. Craig, Phoenix, Ariz.

Where Under Our Form of Government Do Public Health Powers Reside and How Should They Be Exercised? W. H. Saunders, Montgomery, Ala.

The Future of Preventive Medicine, H. A. Moody, Mobile, Ala.

Thursday Morning and Afternoon, Joins Session with the Section on Practice of Medicine.

Discussion of the Manner of Infection and Prophylaxis of Typhoid Fever:

On the Source and Manner of Typhoid Fever, Wm. H. Welch, Baltimore.

Prophylaxis, John S. Fulton, Baltimore.

Discussion, John H. Musser, Philadelphia.

Discussion on the Manner of Infection and Prophylaxis of Yellow Fever:

Sources and Manner of Infection, James Carroll, U. S. A.

Prophylaxis, John Guiteras, Havana, Cuba.

Discussion, Stanford E. Chaille, New Orleans.

Discussion on the Manner of Infection and Prophylaxis of Plague:

Sources and Manner of Infection, W. J. Calvert, St. Louis.

Prophylaxis, Lewellys F. Barker, Chicago.

Discussion, F. G. Novy, Ann Arbor.

Section on Ophthalmology.

Chairman, John E. Weeks, New York; Secretary, Frank C. Todd, Minneapolis.

Address of the Chairman.

Vernal Conjunctivitis, Wm. Campbell Posey, Philadelphia.

Subtropical Trachoma, with Special Reference to a New Therapeutic Agent, Ruffin A. Wright, Mobile, Ala.

The Treatment of Trachoma, Edgar Doak Capps, Fort Worth, Texas.

The Action of Adrenalin in Acute Conjunctival Inflammation, Louis J. Lautenbach, Philadelphia.

Experimental Study on Some Methods of Combating Post-Operative Infection of the Anterior Segment of the Globe, E. C. Ellett, Memphis, Tenn.

Ocular Complications of Bright's Disease, Louis Stricker, Cincinnati.

Subconjunctival Medication with an Especial Reference to the Use of Salt-Sugar Solution in Acute Affections of the Anterior Portions of the Eye, Howard M. Morton, Minneapolis.

Albuminuric Retinitis and the Decapsulation of the Kidney, George F. Suker, Chicago.

SYMPOSIUM ON THE INFLUENCE OF THE CERVICAL SYMPATHETIC ON THE EYE.

(A) Experimental Researches Regarding the Influence of the Cervical Sympathetic on the Eye, Geo. E. de Schweinitz, Philadelphia.

(B) The Influence of Resection of the Superior Ganglion of the Cervical Sympathetic in Glaucoma, Wm. H. Wilder, Chicago.

(C) Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmus and Exophthalmic Goiter, James Moores Ball, St. Louis.

(D) Pathology of the Cervical Sympathetic, John E. Weeks, New York.

Arteriosclerosis (Endarteritis) and Its Bearing on Retinal and Choroidal Lesions, Chas. Stedman Bull, New York.

Study of the Nerve Head in Relation to Certain Other Fundus Anomalies, Chas. H. Beard, Chicago.

Retinal Disease Limited to the Region of the Macula Lutea, Henry Gradle, Chicago.

Address: Congenital Total Color Blindness, Based on a Study of Nine Cases, Prof. Wm. Uhthoff, Breslau, Germany.

Pathologic Exhibit, prepared by a committee consisting of Casey A. Wood, Chicago; Edward A. Shumway, Philadelphia, and H. V. Würdemann, Milwaukee, Wis.

Report of committee:

Methods of Preparing and Preserving Ophthalmic Specimens for the Museum. Address by Chairman, Casey A. Wood.

Some Points in the Pathology of the Eye. Illustrated by the Present Exhibit of Morbid Growths, Edward A. Shumway.

SYMPOSIUM ON THE BACTERIOLOGY OF THE EYE.

Bacteriologic Exhibit, prepared by a committee consisting of R. L. Randolph, Baltimore; Brown Pusey, Chicago; and Edgar Thompson, New York.

(1) The Bacteria Concerned in the Production of Eye Inflammations; address by Chairman, Robert L. Randolph.

(2) Bacteria in the Conjunctiva, Cornea, Iris, Ciliary Body and Choroid, and Changes Caused Thereby. (Illustrated by projection with a lantern of sections and lantern slides.) Brown Pusey, Chicago.

(3) The Essentials and Unessentials of Ophthalmic Asepsis, Harold Gifford, Omaha.

Development of the Fusion Center in the Treatment of Strabismus, Nelson M. Black, Milwaukee, Wis.

A Set of Charts for Stereoscope To Be Used for an Amblyopic Eye or for Treatment of Squint, Albert B. Hale, Chicago.

Cramp of the Ciliary Muscle Due to Eye-strain, J. W. Wright, Columbus, O.

Skiascopy as a Method of Precision, Edward Jackson, Denver.

Some Observations on the Eye Complications of Smallpox During the Recent Epidemic in Cleveland, A. R. Baker, Cleveland, O.

Some Rare Corneal Complications in Ophthalmia Neonatorum, A. A. Hubbell, Buffalo, N. Y.

Skin Grafting on the Eyelids, Oscar Dodd, Chicago.

Entropion and the Operations Employed for Its Relief, John O. McReynolds, Dallas, Texas.

Sympathetic Ophthalmia as the Result of Trauma in the Ciliary Region, John Sabert Mott, Kansas City, Mo.

A Case of Syphilitic Orbital Periostitis and Optic Neuritis, in which Vision Was Nearly Extinguished But Fully Restored, F. C. Hotz, Chicago.

Traumatic Lesions of the Ocular Adnexa; with Report of a Case of Contused Wound of the Eyebrow Resulting in Complete Monocular Blindness Unaccompanied by Ophthalmoscopic Changes, Ellet O. Sisson, Keokuk, Iowa.

Exhibition of Specimens and New Instruments.

Extraction of the Crystalline Lens in High Myopia, H. V. Würdemann and Nelson M. Black, Milwaukee, Wis.

The Management of Myopia, J. H. Claiborne, Jr., New York.

Suggestions on the Pathogenesis of Glaucoma, N. J. Hepburn, New York.

Report of a Case of Complete Absence of Both Eyeballs at Birth, Lawrence R. Ryan, Galesburg, Ill.

Calcareous Degeneration of Corneal Cicatrices, H. Moulton, Fort Smith, Ark.

Ocular Incoördination and Cerebral Reflexes, F. Park Lewis, Buffalo, N. Y.

The Voluntary and Involuntary Brain Centers Controlling the Ocular Muscles, G. C. Savage, Nashville, Tenn.

Remarks on the Horopter, Geo. T. Stevens, New York.

Our Present Knowledge of the Cerebral Centers of the Eye, C. Barck, St. Louis.

Section on Diseases of Children.

Chairman, John C. Cook, Chicago; Secretary, Thos. S. Southworth, New York.

Address of Chairman.

Anatomic and Physiologic Correspondence of Child and Adult, William T. Eckley, Chicago.

The Treatment of Scarlet Fever; Its Complications and Sequelæ, H. M. McClanahan, Omaha.

Acute Fatty Degeneration, Probably Phosphorus Poisoning, in an Infant One Year Old, Isaac A. Abt, Chicago.

Hydronephrosis in a Child Four Years Old, with Operation and Recovery, S. W. Kelley, Cleveland, Ohio.

Acute Suppurative Cervical Adenitis of Infancy, Thos. S. Southworth, New York.

Rheumatism of the Appendix in Childhood, Frank X. Walls, Chicago.

Some Considerations in the Treatment of Broncho Pneumonia in Children, William Edgar Darnall, Atlantic City, N. J.

Belladonna in the Broncho-Pneumonias of Children, D. A. Hodghead, San Francisco.

Observations on Breast Feeding From an Obstetrician's Point of View, with Report of Cases, Effa V. Davis, Chicago.

Retained Intubation Tubes, with a Method of Treatment of the Larynx, Leading to Their Final Extraction, B. R. Shurly, Detroit.

The Infant Digestive Disturbances, A. C. Cotton, Chicago.

Observations on Prolonged Withdrawal of all Food in the Management of Certain Cases of Intestinal Disorders, Thomas D. Parks, Birmingham, Ala.

Infant Feeding; Its Relation to the Diarrheal Diseases of Infancy, J. G. Mastin, Chicago.

Case of Probable Gumma of the Liver in a Child of Six, J. P. Crozer Griffith, Philadelphia.

Every-day Problems in Infant Feeding, Henry Enos Tuley, Louisville, Ky.

The Special Value of Adrenalin in Acute Inflammations of the Mucous Membranes of Children, Louis J. Lautenbach, Philadelphia.

The Causes of High Mortality Among Infants in Institutions, with Considerations on Its Possible Reduction, Charles O'Donovan, Baltimore.

Otitis Media in Infancy, John Lovett Morse, Boston.

Capillary Bronchitis, Philip F. Barbour, Louisville, Ky.

Is the Study of Pediatrics Worth the Attention It Gets, and Does It Get the Attention It Deserves? C. F. Wahrer, Fort Madison, Iowa.

The Modern Treatment of Diphtheria, Louis Fischer, New York.

The Inherent Reaction of the Organism in the Diarrheas of Childhood, John Madison Taylor, Philadelphia.

Chorea, W. C. Hollopeter, Philadelphia.

Fresh Air in the Treatment of Children's Diseases, Robert W. Hastings, Boston.

Infant Feeding, Alex. McAlister, Camden, N. J.

Management of Catarrhal Pneumonia in Infants and Young Children, Charles G. Kerley, New York.

Grip in Children, William C. Williams, Chicago.

The Feeding of Healthy Infants, Charles Douglas, Detroit.

The Safranin Reaction in the Urine of Children, W. S. Christopher, Chicago.

Some Suggestions in the Therapy of Infancy, E. W. Saunders, St. Louis.

Aphthæ and Herpes Contracted by Children Drinking Milk from Cows Suffering from Foot and Mouth Diseases, E. F. Brush, Mount Vernon, N. Y.

Suggestions for Reducing the Prevalence of Summer Diarrhea, J. Ross Snyder, Birmingham, Ala.

The Pathology of Summer Diarrheas of Children, G. W. Boot, Evanston, Ill.

Section on Stomatology.

Chairman, M. L. Rhein, New York; Secretary, Eugene S. Talbot, 103 State Street, Chicago.

Chairman's Address, M. L. Rhein, New York.

SYMPOSIUM ON DENTAL PULP.

Notes on Pulp Technic, Martha Anderson, Moline, Ill.

Minute Structures of the Dental Pulp, Vida A. Latham, Chicago.

The Vasomotor System, Eugene S. Talbot, Chicago.

The Dental Pulp Viewed Without the Microscope, T. E. Constant, Scarborough, York, England.

The Development of Hard Tissue in the Pulp, D. E. Causch, Brighton, England.

Some Histologic Facts Contradictory to the Theory of Odontoblasts, Michael Morganstein, Strassburg, Germany.

Pulp Hypertrophy of the Teeth, Oskar Romer, Strassburg, Germany.

Tolerance of Tissues for Foreign Bodies, with Special Reference to the Pulp and Peridental Membrane, M. H. Fletcher, Cincinnati.

Professional Responsibilities, A. E. Baldwin, Chicago.

The Dental Symptoms of Diabetes Mellitus, Hermann Prinz, St. Louis.

Germicides, A. H. Peck, Chicago.

A System for the Correction of Hare-lip and Cleft Palate, G. V. I. Brown, Milwaukee, Wis.

Is the Accomplishment of Reasonable Ideals in Dental Education Near at Hand, Chas. Chittenden, Madison, Wis.

The Influence of Local and General Disturbances on the Oral Secretions, Geo. F. Eames, Boston.

The Dentist in the U. S. Navy, Richard Grady, Baltimore.

Methods of Controlling Hemorrhage of the Oral Cavity, H. E. Belden, New Orleans.

Empyema of the Maxillary Sinus, O. N. Heise, Cincinnati.

Medical and Dental Libraries, Alice M. Steeves, Boston.

Orthodontic Facial Orthopedia, W. E. Walker, New Orleans.

A paper is also to be read by J. Choquet, Paris, France.

Section on Nervous and Mental Diseases.

Chairman, F. W. Langdon, Cincinnati; Secretary, F. Savary Pearce, 1407 Locust Street, Philadelphia.

Address of Chairman, F. W. Langdon, Cincinnati.

Some Graphic Observations on Ankle-Clonus, A. A. Eshner, Philadelphia.

Penetrating Wound of Both Cerebral Hemispheres, with Recovery, W. S. Lindsay, Topeka, Kan.

Trend of Modern Psychiatry and Its Relation to General Medicine, John Punton, Kansas City, Mo. Discussion opened by F. Savary Pearce, Philadelphia.

A Contribution to the Study of Visual Disturbances in Brain Injury, William E. Gamble, Chicago.

Epilepsy; A Clinical Study, J. G. Biller, Cherokee, Iowa.

Pathology of Inebriety, T. D. Crothers, Hartford, Conn.

Ambulatory Automatism, Hugh T. Patrick, Chicago.

Relation of Epilepsy to Chronic Gastro-Intestinal Diseases, G. W. McCaskey, Fort Wayne, Ind.

The Use of the Ultra-Violet Ray in the Treatment of Functional and Organic Nervous Diseases, Albert E. Sterne, Indianapolis.

SYMPOSIUM ON RELATION OF PUBLIC SCHOOL METHODS TO PSYCHOSES.

Causes, Predisposing and Exciting, Herman H. Hoppe, Cincinnati.

Relation of the Public School to the Seminary and College as to Psychoses, F. Savary Pearce, Philadelphia.

Best Methods of Counteracting Psychoses Due to Strain and Stress, William J. Herdman, Ann Arbor, Mich.

Discussion to be opened by (1) H. N. Moyer, (2) John Punton, (3) F. W. Langdon.

Therapy of Insanity, Orpheus Everts, Cincinnati.

A Consideration of the Neuroses of Status Lymphaticus, A. P. Ohlmacher, Gallipolis, Ohio.

Some Unusual Cases of Paralysis Agitans, Philip Zenner, Cincinnati.

Report of Two Cases of Cerebral Hematoma, H. A. Tomlinson, St. Peter, Minn.

The Nervous Phenomena Associated with Movable Kidney, Wharton Sinkler, Philadelphia.

Relation Between Neurasthenia and General Paresis, E. D. Bondurant, Mobile, Ala.

Atrophy of Hand Muscles with Localized Sensory Disturbances; Possibly Early Syringomyelia, D. I. Wolfstein, Cincinnati.

Carcinoma of Spine and Meninges Secondary to Cancer of the Breast, F. Savary Pearce and A. C. Buckley, Philadelphia.

Ten Cases of Chronic Morphinism and Results of Treatment, A. J. Pressey, Cleveland, Ohio.

Some Toxemias in Relation to the Production of Nervous and Mental Disease, Samuel Bell, Detroit.

Treatment of Nervous and Mental Diseases of Toxic Origin, F. P. Norbury, Jacksonville, Ill.

Tabes in the Negro, D'Orsay Hecht, Chicago.

Treatment of Emotional Disturbances, Howell T. Pershing, Denver.

Climatology, etc., of the Insane, John W. Robertson, Alameda, Cal.

Section on Cutaneous Medicine and Surgery.

Chairman, John A. Fordyce, New York; Secretary, R. R. Campbell, 204 Dearborn Street, Chicago.

The Modern Conception of Eczema, John A. Fordyce, New York.

Larva Migrans, Henry W. Stelwagon, Philadelphia.

The Influence of the Menstrual Function on Certain Diseases of the Skin, L. Duncan Bulkley, New York.

Results in Radiotherapeutics and Clinical Conclusions, Dr. H. R. Varney, Detroit.

Fibroma Molluscum, Henry G. Anthony, Chicago.

Diagnosis of Cutaneous Syphilis, Isadore Dyer, New Orleans,

Treatment of Syphilis by Injections, M. L. Heidingsfeld, Cincinnati.

Syphilitic Fever, Eugene Carson Hay, Hot Springs, Ark.

Papilloma of the Sole, Douglass W. Montgomery, San Francisco.

Diagnosis of Smallpox, A. W. Brayton, Indianapolis.

Morbid Anatomy and Treatment of Smallpox, N. D. Brayton, Indianapolis.

Some Clinical Observations on Chickenpox, Jay F. Schamberg, Philadelphia.

Pityriasis Rosea, L. Weiss, New York.

Report of a Case of Pemphigus Chronicus, William Frick, Kansas City.

Tuberculosis Cutis Frambesioides, William S. Gottheil, New York.

Two Cases of Pemphigus Foliaceous, David Lieberthal, Chicago.

The Bacillus of Syphilis, Justin de Lisle, New York.

The Treatment of Leprosy, A. H. Ohmann-Dumesnil, St. Louis.

Atrophia Cutis Idiopathica; A Study of Two Cases, W. S. Gottheil, New York.

Notes on the Treatment of Lichen Planus, Joseph Zeisler, Chicago.

Clinical Results Obtained in the Use of Finsen's and Other Lights, L. E. Schmidt, Chicago.

Notes of An Interesting Case of Lupus Vulgaris, R. R. Campbell, Chicago.

The Consideration of Scarlet Fever, William L. Baum, Chicago.

Differential Diagnosis of Pemphigus and Dermatitis Herpetiformis, L. Blake Baldwin, Chicago.

Thursday morning, May 7, will be devoted to clinical demonstrations or rare skin diseases, with presentation of cases at Charity Hospital.

Section on Laryngology and Otology.

Chairman, Geo. L. Richards, Fall River Mass. Secretary, J. F. Barnhill, Indianapolis.

Address of Chairman.

Report of Cases Showing Instrument and Technic in the Cure of Deaf-Mutism, Maury M. Stapler, Macon, Ga.

The Treatment of Chronic Otitis Media, A. T. Mitchell, Vicksburg, Miss.

The Necessity of an Early Diagnosis and Treatment in Acute Suppurative Affections of the Middle-Ear, Frank D. Boyd, Fort Worth, Texas.

Nasal Polypus; Origin and Treatment, Chas. H. Baker, Bay City, Mich.

Diphtheria of the Nose, W. Scheppegrell, New Orleans.

Membranous Pharyngitis, John McReynolds, Dallas, Texas.

Report of a Case of Empyema of the Frontal Sinus, C. A. Thigpen, Montgomery, Ala.

Some Reasons for Past Unsatisfactory Results in the Treatment of Chronic Empyema of the Maxillary Sinus, Redmond Payne, San Francisco.

Malignant Diseases of the Nasal Passages, Francis J. Quinlan, New York.

Paraffin Injected Subcutaneously for the Correction of Nasal and Other Deformities, Harmon Smith, New York.

Paraffin in Nasal Deformities, P. J. H. Farrell, Chicago.

Some Observations on the Removal of Diseased Tonsils, Charles M. Robertson, Chicago.

(Note: Dr. Robertson will give a clinical demonstration of his method of removal of tonsils.)

The Special Influence of the High Altitude on the Nose and Throat, S. E. Solly, Colorado Springs.

A General Consideration of the Diseases of the Ethmoid Bones and Cells, Robert C. Myles, New York.

Non-Tubercular Hemorrhages of the Air-Passages, L. F. Page, Indianapolis.

The Resection Operation for the Correction of Deflections of the Nasal Septum, Otto T. Freer, Chicago.

How Far Should the Specialist in Rhinology and Otology Presume to Treat the Systemic Condition? C. M. Cobb, Lynn, Mass.

Non-Operable Catarrh, Fayette C. Ewing, St. Louis.

Exhibition of Author's Electro-Motor Nasal Saw, with Remarks, Melville Black, Denver.

Report of Three Cases: Case of Prolonged Intubation, Peculiar Symptoms Following Middle-Ear Operation and Case of Esophageal Obstruction Due to an Upper Alveolar Plate, Geo. F. Cott, Buffalo, N. Y.

The Early Manifestations of Laryngeal Tuberculosis: Their Recognition and Treatment, H. H. Briggs, Asheville, N. C.

The Teaching of Otology to the Undergraduate Medical Student, B. Alex. Randall, Philadelphia.

Auscultation of the Mastoid Process, A. H. Andrews, Chicago.

Proof of the Efficacy of Treatment by Aseptic Drainage in Acute Suppurative Otitis, H. Gradle, Chicago.

The Present Status of Ossiculectomy, J. A. Stucky, Lexington, Ky.

Treatment of the Eustachian Tube, Geo. B. McAuliffe, New York.

Some Recent Experiences with Chronic Suppurations of the Ear, Philip Hammond, Boston.

The Distribution of Blood Vessels in the Labyrinth of the Ear, with Exhibition of Preparation and Drawing, and (b) Wood's Metal Casts of the Middle-Ear with the Exhibition of Preparation and Lantern Demonstration, Geo. E. Shambaugh, Chicago.

Perisinusal Abscess of Lateral Sinus with Metastasis in Liver and Sterno-Clavicular Arthritis, Gordon King, New Orleans.

Otitis Media Catarrhalis Chronica, S. McCuen Smith, Philadelphia.

Mastoid Diseases and Meningitis, Seymour Oppenheimer, New York.

The Immediate Relief of Hysterical Manifestations in the Larynx by Suggestion, H. W. Loeb, St. Louis.

The Great Value of Drainage and Ice in the Early Stages of Mastoiditis, Sargent F. Snow, Syracuse, N. Y.

Deformity of the Nasal Septum in Atrophic Rhinitis: Shall We Operate? Kate W. Baldwin, Philadelphia.

Note: The pathologic and anatomic exhibit of specimens pertaining to the work of this Section, and new instruments will be continued. Members are requested to bring with them any unusual or interesting specimens or instrument. An interesting collection is already promised.

J. F. BARNHILL, Secretary.

Section on Materia Medica, Pharmacy and Therapeutics.

Chairman, Solomon Solis-Cohen, Philadelphia; Secretary, C. S. N. Hallberg, 358 Dearborn Street, Chicago.

Address of Chairman.

Report of Committees on Papers presented at the last annual session:

On Dosage of Liquid Medicines, Frank Woodbury, H. C. Wood, Jr., and A. A. Eshner.

On Nerve Nostrums and Drug Addiction, A. W. Baer, W. J. Robinson and H. C. Wood, Jr.

Is Pharmacologic Action Determined by Chemical Structure or by Physical Characters? Arthur R. Cushney, Ann Arbor, Mich.

Research Problems of Pharmacology, Torald Sollmann, Cleveland, O.

The Physiologic Effects of the Ions, Ralph N. Webster, Chicago.

The Chemistry of Ergot, Albert B. Lyons, Detroit.

Mercury, Laura House Branson, Iowa City, Iowa.

The Absorption of Iron from the Alimentary Canal, Winfield S. Hall, Chicago.

Drugs Used in Nervous Diseases, George F. Butler, Alma, Mich.

The Mind as a Causative and Therapeutic Factor in Medicine, Bittle C. Keister, Roanoke, Va.

Limitations of the Dietetic Treatment of Diabetes, Arthur R. Elliott, Chicago.

Intestinal Antiseptics, Their Uses and Limitations, J. A. Storck, New Orleans, La.

Remedies for the Relief of Dropsy, Egbert LeFevre, New York, N. Y.

Demonstrated Pathologic Effects of Alcohol, T. D. Crothers, Hartford, Conn.

The Legitimate Therapeutic Uses of Alcohol, O. T. Osborne, New Haven, Conn.

The Management of Fever in General, Augustus A. Eshner, Philadelphia.

The Usefulness and Limitations of Drugs on Pyretic Conditions, Robert Reyburn, Washington, D. C.

The Therapeutic Value of Spinal Puncture for the Cerebral Symptoms of Typhoid Fever, J. H. Musser, Philadelphia.

The Limitations and Use of Aconite and Veratrum Viride, Warren B. Hill, Milwaukee, Wis.

Venesection: Its Use and Abuse, C. F. Wahrer, Fort Madison, Iowa.

Exercise as a Mode of Treatment of Heart Diseases, N. S. Davis, Jr., Chicago.

The Control of Hemorrhage by Drugs, with Particular Reference to Gelatin, Edward F. Wells, Chicago.

The Morphin Series, Smith Ely Jelliffe, New York.

The Composition of Some of the Lately Introduced Nostrums and So-called Synthetics, William J. Robinson, New York.

The U. S. Pharmacopeia of 1900, Carl S. N. Hallberg, Chicago.

Advance in Electric Therapeutics, A. W. Baer, Chicago.

Recent Advances in Actinotherapy, William S. Gottheil, New York.

Dry Superheated Air in Therapeutics, Clarence E. Skinner, New Haven, Conn.

Section on Pathology and Physiology.

Chairman, Victor C. Vaughan, Ann Arbor, Mich.; Secretary, Joseph McFarland, 442 W. Stafford Street, Germantown, Pa.

The Chemistry of the Bacillus Coli Communis, Mary F. Leach.

The Chemistry of the Bacillus Typhosus, May Wheeler.

The Toxicity of the Intra-cellular Substance of Bacillus Typhosus, Louis M. Gelston.

The Anthrax Toxin, J. Walter Vaughan, St. Louis.

The Intra-cellular Toxin of Bacillus Pyocyaneus, Daniel McIntyre.

A Preliminary Chemical Study of the Hepatic Cells of the Ox, Frank Spencer and Frederick Munson.

The Toxicogenic Bacteria Found in Drinking Water, William G. Carhart.

The Chemical Tests for Morphin in the Presence of the Products of Bacterial Decomposition, Myron W. Clift.

Endothelioma of the Uterus, F. Robert Zeit, Chicago.

Condition of the Endometrium in Cases of Uterine Myomata, Thomas S. Cullen, Baltimore.

Demonstration of a "Mixed Tumor of the Kidney (Wilms), E. R. LeCount, Chicago.

Multiple Periosteal Sarcomata of the Cranium, with Involvement of Retroperitoneal Lymph (Hemo-lymph) Nodes and Attending Severe Anemia, Walter L. Bierring, Iowa City, Iowa.

Primary Intestinal Tuberculosis, with Organism Pathogenic to a Calf, H. Gideon Wells, Chicago.

The Apparent Immunizing Value of Attenuated Tubercle Bacilli, E. A. de Schweinitz, Washington, D. C.

Studies of Antirennene, Joseph McFarland, Philadelphia.

A Case of Short-limbed Dwarfism, L. Hektoen, Chicago.

A Case of Giantism and Leontiasis Ossea, in the Lantern Slide Demonstration, E. R. LeCount for Peter Bassoe, Chicago.

Tissue Changes Under X-Ray Influence, W. S. Newcomet, Philadelphia.

The Protoplasmic Activity of the Renal Epithelium, as Determined by the Elimination of Pigments Injected Into the Circulation, W. S. Carter, Galveston, Texas.

Demonstration of New Physiologic Apparatus, Winfield S. Hall, Chicago.

The Working Capacity of a Muscle, J. G. Holmes, Chicago.

The Neuralgia and the Ependymal Epithelium of Teratoid Tumors, Henry A. Christian, Boston.

The Morphology and Biology of the Parasites of Blastomycetic Dermatitis, F. J. Otis and Newton Evans, Battle Creek, Mich.

The Principle of Invalid Feeding, L. Breisacher, Detroit.

The Biologic Aspects of Motion, Guido Bell, Indianapolis.

The Influence of Consanguinity on the Organs of Special Sense, L. W. Dean, Iowa City, Iowa.

The Cultivation of Trypanosoma Lewisii, F. G. Novy and W. J. McNeal, Ann Arbor, Mich.

A Study of the Influence of Blood Letting on Metabolism, also the Influence of Chinic Acid on Uric Acid Output, William Gies, New York.

Precision in the Determination of Human Parasites, Henry B. Ward, Lincoln, Neb.

Aerogenes Capsulatus Infection of the Neck, Louis Leroy, Nashville, Tenn.

New Members.

For the month of March, 1903:

ALABAMA.	ARKANSAS.
Snyder, J. Ross, Birmingham.	Gill, John M. F., Prescott.
Bancroft, Marion J., Mobile.	Allen, Kotz, Wheatley.
May, Wm. L., Sandusky.	Weaver, J. H., Hope.
Wright, Ruffin A., Mobile.	Smiley, John L., Robinson.
King, Goldsby, Selma.	Wilson, Olive A. Chas., Paragould.
Peerson, J. M., Florence.	Bradford, T. B., Cotton Plant.

McCallum, John A., Arkadelphia.
Pettey, Geo. E., Searcy.

CALIFORNIA.

Willard, Wm. P., San Francisco.
Brill, Wm., Los Angeles.
Topping, Frank Pixley, San Francisco.
Ardenyi, Jos., San Francisco.
Tower, Franklyn J., Pasadena.
Roblee, W. M., Riverside.

DISTRICT OF COLUMBIA.

Carroll, Jas., Washington.
Lawrence, Albert L., Washington.
Dufour, Clarence R., Washington.
Merrill, Walter H., Washington.
Richardson, Edw. E., Washington.
Ward, Wm. Krafft, Washington.

FLORIDA.

Grantham, J. M., Tampa.

GEORGIA.

Green, Wm. L., Point Peter.

IDAHO.

Harshbarger, Miller M., St. Anthony.

ILLINOIS.

Schneider, G. J., Elgin.
Bates, Frederick H., Elmhurst.
Chester, Paul, Chicago.
Watson, H. A., Chicago.
Badgley, John A., Malta.
Campbell, John T., Chicago.
Brophy, Truman W., Chicago.
Kimmet, Wm. Alex., Chicago.
Beck, Emil G., Chicago.
Mahoney, Jas. Burris, Chicago.
Schmidt, Marie S., Chicago.
Craig, D. W., Chicago.
Klein, Henry, Chicago.

INDIANA.

Crawford, E. F. W., Hanna.
Bryan, T. L., Evansville.
Dippell, Emil T., Huntington.
Tindal, Edw. F., Muncie.
Brayton, Nelson D., Indianapolis.

INDIAN TERRITORY.

Woodson, Benj. D., Monroe.

IOWA.

Hogle, Kate Anna M., Mt. Vernon.
Lehon, Jas. W., Dunlap.
Bowen, Chas. P., Centerville.

KENTUCKY.

Coldwell, Thos. P., London.
Mobley, J. C., Elizabethtown.
Gardner, W. E., Glendale.
Willis, S. N., Vine Grove.
Allen, M. S., Stillton.
Gray, Jas. R., Elizabethtown.
Stone, Daniel Boone, Hydro.
Bailey, Steele, Stanford.
Sprague, Geo. P., Lexington.
Lewis, John C., Georgetown.

LOUISIANA.

Gaudin, Louis A., Convent P. O.
Jones, Edw. W., New Orleans.
Mioton, S. F., New Orleans.
Huhner, E. J., New Orleans.
Stafford, S. W., New Orleans.
Lynch, W. M. New Orleans.
Hebert, J. S., New Orleans.
Yenni, A. S., New Orleans.
Horton, Clarence L., New Orleans.
Theard, Sidney L., New Orleans.
Elliott, Jno. B., New Orleans.
Nolte, Arthur, New Orleans.
King, Gordon, New Orleans.
Logan, Samuel, New Orleans.
Michinard, Paul, New Orleans.
Dupuy, Homer, New Orleans.
Gates, Sterling J., Franklin.
Smith, Beverley W., Franklin.
Patterson, O. M., Bastrop.
Hope, Chas. L., Oak Ridge.
Williams, Sidney L., Oak Ridge.
Porter, S. D., Moreauville.
Newell, E. Dunbar, St. Joseph.
Dortch, Fred'k Wm., Barham.

MARYLAND.

Cotton, Albertus, Baltimore.
Abercrombie, John R., Baltimore.
Frames, W. Wayland, Baltimore.
Bishop, John S., Baltimore.
McGlannan, Alexius, Baltimore.
Gabriel, Calvin L., Baltimore.
Cole, J. Wesley, Baltimore.
Knox, Jr., J. H. Mason, Baltimore.
Price, Marshall Layton, Baltimore.

MASSACHUSETTS.

Clark, Frederick T., Westfield.
Washburn, Frank H., Jefferson.

MICHIGAN.

Tapert, R. T., Detroit.
Ingleright, Leon R., Rose City.
Nelson, E. B., Chassell.
Eggleston, Elmer L., Battle Creek.
McGee, Harry S., Jackson.
Bush, Adelbert G., Grand Rapids.
Fleming, Wm. E., Detroit.

MINNESOTA.

McLean, Thos. Nicol, Fergus Falls.
Weeks, Leonard C., Detroit.
Linton, Wm. B., Minneapolis.
Anderson, A. E., Minneapolis.
Oliver, Clifford Irwin, Graceville.
Tanner, Andrew F., Ely.

MISSISSIPPI.

Yandell, Wm. M., Canton.
Sims, Walter Scott, Jackson.
Rowan, Jas. Albert, Wesson.

NEBRASKA.

Malster, John Chas., Stromsburg.
Pinkerton, W. J., Mead.
Lewis, Alfred, Valentine.

NEW HAMPSHIRE.

Noyes, Edmund Herbert, Plaistow.

NEW JERSEY.

Canaway, Walt Pouder, Atlantic City.

NEW YORK.

Knapp, Wm. H., Binghampton.
Rand, H. W., Keene Center.
Rambaud, Geo. Gibler, New York.
Fridenburg, Percy, New York.
Ellison, Chas. Ruxton, New York.
Billings, Jr., John S., New York.
Smith, Harmon, New York.
Ayvazian, Antranig, New York.
Casseli, Jas. Wilson, New York.
Heuel, Frank, New York.
Brouner, Walter Brooks, New York.
Gallagher, Edw. J., New York.
Brunner, Wm. J., New York.
Chauveau, Jean F., New York.
Kirchhof, Chas. Geo., New York.
Flint, Jr., Austin, New York.
McAuliffe, Denis A.
Lurie, Jos. H., New York.
Pettit, Louis C., Ward's Island, New York.
Piper, Chas. W., Wurtsboro.
Parmenter, John, Buffalo.
Nour, George Elias, Niagara Falls.
Ransom, David H., Buffalo.
Dumond, Marcus Abner, Ithaca.
Myers, John Franklin, Sodus.
Tremaine, Annie M., Sonyea.
Clark, Geo. W., Waterloo.
Beers, Jr., Nathan Thomas, Brooklyn.
Ross, Wm. Jas., Clayton.
Crosby, Alex. H., Leonville.
Donohue, F. O., Syracuse.
Carroll, Jane W., Buffalo.
Bassett, John N., Canton.
Carpenter, Eugene H., Oneida.
Nevin, Ethan A., Ogdensburg.
DeCeu, Robt. E., Buffalo.
Ayer, Warren L., Owego.
Schroeter, Ludwig, Buffalo.

NORTH CAROLINA.

Williams, John A., Reidsville.

OHIO.

Forchheimer, Fred'k, Cincinnati.

OKLAHOMA.

Munger, G. D., Oklahoma City.

PENNSYLVANIA.

Rea, Jas. L., Scranton.
Sajous, C. E. de M., Philadelphia.

SOUTH CAROLINA.

Culbertson, John R., Replay.
Hill, L. T., Abbeville.
Pressley, E. W., Clover.

SOUTH DAKOTA.

Cruickshank, Thos., Vermillion.
Scofield, Henry B., Scotland.
Edward, Geo., Lake Preston.

TENNESSEE.

Cook, Maximillian Montrose, Santa Fe.
Williams, D. H., Knoxville.
Clarke, Claude Y., Mt. Pleasant.

TEXAS.

Van Zandt, I. L., Ft. Worth.
Mathews, John Owen, Howe.
Clough, Ernest Linwood, Beaumont.
Wheat, M. H., Marshall.
Vermillion, John W., McDade.
Burke, Henry Sothoron, Corpus Christi.

UTAH.

Root, Emerson Frank, Salt Lake City.

VIRGINIA.

Sparks, Geo. H., Crooked Run.

WASHINGTON.

Thomson, Curtis H., Seattle.
Falk, Frederick, Seattle.

WEST VIRGINIA.

Canaday, John Egerton, Paint Creek.

WISCONSIN.

Caswell, Harlow O., Ft. Atkinson.
Casey, Merle, Almond.
Ballard, J. A., LaCrosse.
Gregory, W. W., Stevens Point.

PROPOSED CODE OF ETHICS

Offered at Saratoga Springs, 1902, and to Be Acted on at New Orleans.

At the last session of the American Medical Association the following action was taken:

Dr. E. Eliot Harris, New York, presented the following resolution:

For more than a year some of the members of the Council of the New York State Medical Association have been engaged in a critical examination of the ethical part of the laws of the American Medical Association, resulting in the preparation of a revision of the Code of Medical Ethics. This revision has been approved by the Council of the New York State Medical Association, and the delegates have been instructed to present it to the House of Delegates at this session.

Resolved, That the President appoint a committee of five to examine and report for final action at the annual session in 1903 the proposed revised Code of Medical Ethics which is herewith submitted in writing;

Resolved, That the proposed revised Code of Medical Ethics be published in the Association's JOURNAL three times before the meeting in 1903.

On motion of Dr. C. A. L. Reed, Cincinnati, the resolution was adopted.

The following constitute the committee: Dr. E. Eliot Harris, New York, chairman; Dr. William H. Welch, Baltimore; Dr. T. J. Happel, Tennessee; Dr. Nicholas Senn, Chicago, and Dr. Joseph D. Bryant, New York.

CHAPTER I.—OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.—DUTIES OF PHYSICIANS TO THEIR PATIENTS.

SECTION 1.—Physicians should not only be ever ready to obey the calls of the sick, but should be mindful of the high character of their mission and of the responsibility they must incur in the discharge of momentous duties. In their ministrations they should never forget that the ease, the health, and the lives of those entrusted to their care depend on skill, attention, and fidelity. In their deportment they should unite tenderness, cheerfulness and firmness, and thus inspire all sufferers with gratitude, respect and confidence. These observances are the more sacred because, generally, the only tribunal to adjudge penalties for carelessness or neglect is their own conscience.

SEC. 2.—Every case committed to the charge of a physician should be treated with attention and humanity, and reasonable indulgence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted, in their professional visits, should be guarded with the most scrupulous fidelity and honor.

SEC. 3.—The obligation of secrecy extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance should ever be divulged by physicians, except when imperatively required to do so by the laws of the state. The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice.

SEC. 4.—Frequent visits to the sick are generally requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, and to meet promptly every change which may occur. But unnecessary visits are to be avoided, as they give undue anxiety to the patient.

SEC. 5.—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really exists; and even to the patient, if absolutely necessary. This notice, however, is often so peculiarly alarming when given by the physician, that its deliverance ought to be declined whenever it can be assigned to any other person of good judgment.

SEC. 6.—The physician should be the minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts but by the words or manner of the physician whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

SEC. 7.—The medical attendant ought not to abandon a patient because deemed incurable; for, continued attention may be highly useful to the sufferer, and comforting to the relatives, even in the last period of the fatal malady, by alleviating pain and by soothing mental anguish.

SEC. 8.—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of vicious conduct ought never to be neglected. Good counsels, or even remonstrances, will give satisfaction, not offense, if they be tactfully proffered and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.—OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

SECTION 1.—The members of the medical profession, on whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, are surely entitled to the highest private and public recognition.

SEC. 2.—The first duty of a patient is to select as medical adviser one who has received a sound general and special education, whose habits are good, and who is not devoted to any pursuit incompatible with professional obligations.

SEC. 3.—The sick should always apply for advice in what may appear to be a trivial case, for the slightest accident may result gravely. It is also important that the patient seek assistance in the forming stage of a violent disease and communicate unreservedly to the physician its supposed cause,

SEC. 4.—The patient should be on friendly terms with the medical adviser and bear in mind that physicians are under the strongest obligations of secrecy.

SEC. 5.—Women should never allow feelings of delicacy to prevent their disclosing the seat of their peculiar complaints. Howsoever commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with serious consequences, and a patient may sink under a painful disease which might have been prevented had timely intimation been given to the physician.

SEC. 6.—The obedience of a patient to the directions of the physician should be prompt and implicit. Failure in one particular may render an otherwise judicious treatment dangerous and even fatal. This remark is equally applicable to the unauthorized renewal of prescriptions, and to diet, drink, raiment and exercise.

SEC. 7.—As patients become convalescent they are apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse of the disease.

SEC. 8.—Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors who are so frequently met with and who pretend to possess infallible remedies for every disease. Howsoever simple some of their prescriptions may appear to be, it often happens that, besides being in themselves injurious, they are productive of much mischief by contravening the plan of treatment adopted by the physician in attendance.

SEC. 9.—Whenever possible, the patient should avoid even friendly visits of a physician who is not the regular attendant. But when such visits are received, there should be no conversation on the subject of the patient's disease, as a word may be spoken, without any intention of interference, which may destroy confidence in the course pursued and induce the patient to neglect the prescribed directions.

SEC. 10.—The patient or relatives should never send for a consulting physician without the express consent of the medical attendant.

SEC. 11.—Patients should, whenever practicable, send for their physicians in the morning, before the usual hour for going out, and this gives them the opportunity to so apportion their time as to prevent interference of engagements.

SEC. 12.—Except in emergencies patients should avoid calling on their medical advisers during the hours devoted to meals or sleep.

SEC. 13.—The sick should be always in readiness to receive the visits of the physician, as detention, even for a very short time, is often of serious import to some other sufferer.

CHAPTER II.—OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

SECTION 1.—Every individual on entering the profession, and thereby becoming entitled to all its privileges and immunities, incurs an obligation to maintain its dignity and honor, to exalt its standing and to extend the bounds of its usefulness.

SEC. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; and, by unwearied diligence, should resort to every honorable means of enriching the science, and, at the same time, entertain a due respect for those seniors who, by their labors, have contributed to its advancement.

SEC. 3.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to these, as without it their respect and confidence can not be commanded; and to the profession because no scientific attainments can compensate for the want of correct moral principles.

SEC. 4.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye, and an unclouded mind are essential to the welfare, and even to the life, of a human being.

SEC. 5.—It is derogatory to the dignity of the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases, offering advice and medicine gratis and promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success; or to employ any of the other methods of charlatans.

SEC. 6.—Equally derogatory to professional character it is for a physician to hold a patent for any surgical instrument or medicine; or to dispense, or promote the use of, a secret medicine, whether it be composed by this physician or the exclusive property of others, for if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality, and if mystery alone give it public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or of any of the other substances that may be used medicinally.

ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

SECTION 1.—All practicing physicians and their immediate dependents are entitled to the gratuitous services of any one or more of the physicians residing near them.

SEC. 2.—Physicians afflicted with disease should not, as a general rule, undertake the treatment of their own sickness, nor of that of members of their family, for obvious reasons. In such circumstances they are peculiarly dependent on each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such civility may give rise to embarrassment or interfere with that choice on which confidence depends.

SEC. 3.—When a physician is summoned, from a distance, to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives.

ARTICLE III.—OF THE DUTIES OF PHYSICIANS AS RESPECTS VICARIOUS OFFICES.

SECTION 1.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed sometimes require the temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time.

SEC. 2.—The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period half of the pecuniary obligations for such services should be awarded to the acting physician.

ARTICLE IV.—OF THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

SECTION 1.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet emergencies occasioned by disease or accident.

SEC. 2.—The good of the patient being the sole object in view, any physician having a license to practice medicine conferred by a medical board authorized by the state may be aided in consultation.

SEC. 3.—No physician who indicates to the public that his practice is based on a sectarian system of medicine shall be entitled to professional fellowship or to recognition in medical bodies.

SEC. 4.—Consultations should be promoted in difficult cases, as they give rise to confidence and more enlarged views in practice.

SEC. 5.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea of a professional engagement to take precedence over all others and to be a good reason for the relinquishment of any present occupation.

SEC. 6.—As professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

SEC. 7.—In consultations no rivalship or jealousy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

SEC. 8.—The attending physician should be the first to question the sick, after which the consultant should have the opportunity to make such further inquiries as may be necessary.

SEC. 9.—After due examination of the patient, both physicians should retire to a private place for deliberation; and the one first in attendance should communicate the directions, agreed on, to the patient or friends, as well as any opinion which it may be thought proper to express.

SEC. 10.—No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, and by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence.

SEC. 11.—The opinion of the physician in attendance should be delivered first to the patient or friends; and when there are several consultants they should deliver their opinions in the order in which they have been called.

SEC. 12.—No decision should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

SEC. 13.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In case of emergency the consultant should do what is needed, and in the other case should do no more than make an examination of the patient and leave a written opinion, under seal, to be delivered to the attending physician.

SEC. 14.—In consultations theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded not on hypothesis, but on experience and observation.

SEC. 15.—All discussions in consultation should be held as confidential. Neither by words nor manner should any of the parties to a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

SEC. 16.—Should an irreconcilable diversity of opinion occur when several physicians are called on in consultation, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician.

SEC. 17.—It may happen that two physicians can not agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in and, if circumstances prevent the adoption of this course, the patient or friends should make the selection. The physician so designated should take charge of the case and the other should then gracefully retire from any further deliberation in the consultation, or participation in the management of the case.

SEC. 18.—As circumstances sometimes arise to render a special consultation desirable, when the continued attendance of two physicians might be objectionable to the patient, the physician whose

assistance is required in such cases should sedulously guard against all future, unsolicited attendance. Such consultations requiring an extraordinary portion of time and attention, at least a double fee should be expected.

SEC. 19.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified as far as can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in the attending physician.

ARTICLE V.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

SECTION 1.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice entirely on the extent of their medical education.

SEC. 2.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of this physician directly or indirectly tend to diminish the trust reposed in the attending physician.

SEC. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4.—A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another physician in the same illness, except in case of a sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

SEC. 5.—Placed in the position stated in the preceding section, the physician should never throw out damaging insinuations on the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of knowledge or skill.

SEC. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, this physician should resign the care of the patient immediately on the arrival of the family physician.

SEC. 7.—It often happens, in cases of sudden illness, or of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives and who, if necessary, may invoke the aid of some of those present. In such a case, however, the acting physician should cause the family physician to be called, and should withdraw unless requested to continue in attendance.

SEC. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician the case should be surrendered on the return of the absentee.

SEC. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient in consequence of a sudden aggravation of the disease. On such an occasion the immediate needs of the patient should be attended to and the case relinquished on the arrival of the attending physician.

SEC. 10.—When a physician who has been engaged to attend an obstetric case is absent and another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to half the fee, but must resign the patient on the arrival of the physician first engaged.

ARTICLE VI.—OF DIFFERENCES BETWEEN PHYSICIANS.

SECTION 1.—Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur and can not be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a court-medical.

SEC. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which can not be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.

ARTICLE VII.—OF PECUNIARY ACKNOWLEDGMENT.

SECTION 1.—There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to their performance.

SEC. 2.—Poverty, mutual professional obligations, and certain of the public duties named in Sections 1 and 2 of Article 1, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, or any profession or occupation, can be admitted to possess such privilege.

SEC. 3.—It can not be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

SEC. 4.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

SEC. 5.—It is derogatory to professional character for physicians to pay or to offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to demand or to receive such commissions.

CHAPTER III.—OF THE DUTIES OF THE PROFESSION TO THE PUBLIC AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.—DUTIES OF THE PROFESSION TO THE PUBLIC.

SECTION 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary police, public hygiene and legal medicine.

SEC. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement, and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the sanitary police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

SEC. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects, strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

SEC. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of these artful impostors.

SEC. 5.—Physicians ought to use all the influence which they possess to discourage pharmacists from vending the secret or other medicines of charlatans, or from being in any way engaged in their manufacture.

ARTICLE II.—OBLIGATIONS OF THE PUBLIC TO PHYSICIANS.

SECTION 1.—The benefits accruing to the public, directly and indirectly, from the unwearied labors of the profession, are so numerous and important that physicians are entitled to the utmost consideration and respect from the community.

SEC. 2.—The public ought to entertain a just appreciation of medical qualifications, to make a proper discrimination between true science and the assumptions of ignorance and charlatanism; and to afford every encouragement and facility for the acquisition of thorough medical education.

Medical Organization.

The Reorganized States.

It is now less than a year since any of the states adopted the plan of organization, but the progress made in each of them even in that short time has been so marked as to be worthy of special mention.

Michigan.

Michigan accepted the new plan in June, 1902, with only such changes as were necessary to adapt it to local conditions. Dr. Connor informs me that at that time they had but 10 recognized societies, only 5 of which were active, 7 medical clubs, and 5 district societies. The total membership in the state society was 610, of whom 100 were so in arrears for dues that they were practically out.

Much enthusiasm was manifested from the outset and, under the able leadership of Drs. Connor, Bulson, Haughey, Biddle and others too numerous to mention, 70 counties, out of 83 in the state, have been organized and chartered, and missionary work is being actively pressed in each of the others. The paid-up membership has been increased in ten months to over 1,600, and is expected to reach 2,000 before the annual meeting, new members being reported daily. Prominent members from all over the state write that the hopes, aspirations and good fellowship have increased even more than the membership.

Michigan has gone farther than any other state in making its council a strong executive body, with full authority to act for the society in the interum of meetings. The results achieved, as well as those in process of fulfillment, clearly demonstrate the wisdom of this policy. The council held frequent meetings and soon had the state divided into districts, with an active councilor in each who called the physicians together in county after county, brought to their attention the evils which have resulted to both the profession and the public from dissensions in its own ranks in the past, and the good which must result to all from such harmony and co-operation, which can only be brought about by local organizations. These

efforts have been well supported by the journal of the state society, which was established by the council as soon as possible after the re-organization, is the property of the society, is sent free to every member in lieu of the volume of transactions, and is already on a paying basis .

Tennessee.

The Tennessee State Society adopted the Association plan, practically without change, in May, 1902. At that time 14 county societies existed, some active, some more or less dormant, and the total membership in the state body was about 280. During the ten months 49 county societies have been organized and chartered and the membership in the state body has been increased to over 800, with promise of five or six more counties, and a total membership of over 1,000 before the next annual meeting. Drs Miller, Savage, McSwain, Happel, Roberts and many others have been untiring in their efforts to bring about these results, and a revival of interest in professional affairs is manifest in almost every section.

Kentucky.

Kentucky was the second state to adopt the Association plan without change. Twenty county societies then existed, several of them dormant. The total membership in the state association was 551, and about 25 per cent. of these were in arrears for dues. In ten months 72 county societies had been organized and chartered, and 20 more have appointments for organization. Reports from county secretaries are not yet due, and the total membership can not be known accurately until these come in, but it is believed it will be increased to over 1,500 paid-up members. The president of the state association has visited and organized every county in his large district not already in line, as have Drs. Shirley and Wells in their respective districts. Other councilors especially active have been Drs. Frank, Sory, A. T. McCormack, and Steele Bailey, who is also secretary of the association.

OTHER STATES.

Data in regard to Ohio, Colorado and Arkansas, could not be obtained in time for this issue, but active, systematic work is being done in these states, of which full details will be supplied later.

Pennsylvania and Connecticut were previously organized on lines similar to those of the Association plan, and excellent work is going on in these states. It is believed, however, that they would be especially benefited by incorporating the essential features of the uniform system.

Several other states reorganized last year and thought they were adopting the plans of the Association, but in practice it was found that they had modified it almost beyond recognition. So much trouble and confusion has resulted in these states that most of them will probably substitute the uniform system at their coming annual meetings. In the future it will doubtless be better for the friends of a systematic organization of the profession to advise that existing constitutions and by-laws be retained, rather than go through a form of reorganization in which the essential features of the Association plan are ignored. There are sparsely settled districts in nearly every state in which the rank and file of the profession has never been reached in the past, and this has been and will continue to be a difficult problem, but the uniform system proposed is susceptible of infinite and easy modifications as experience may develop the necessity for them, and the results in the states first named above show that it meets the conditions more fully than any other plan which has yet been tried.

This whole question is so important that it is earnestly suggested that representatives to the House of Delegates at the next session come to New Orleans with the facts and figures in regard to all these matters in their respective states well in hand, and that one or more days be given to the consideration of the subject. J. N. MCCORMACK.

Bowling Green, Ky.

Omaha-Douglas County (Neb.) Medical Association.

At its meeting, March 27, the new constitution suggested by the American Medical Association for county organizations was formally adopted. The reorganized society has a membership of 114 out of a possible 125 eligible physicians in the county.

Iosco County (Mich.) Medical Society.

The physicians of this county met at East Tawas, March 25, and organized this society as a branch of the Michigan State Medical Society, with the following officers: Dr. Henry A. Goodale, East Tawas, president; Dr. George S. Darling, Tawas City, vice president, and Dr. Frederick C. Thompson, East Tawas, secretary.

Marinette County (Wis.) Medical Society.

Pursuant to a call from Theodore J. Redelings, eleven physicians met at Marinette, March 24, and organized a county society on the lines proposed by the American Medical Association. Dr. Theodore J. Redelings, Marinette, was elected president; Dr. William Sellars, Wausaukee, vice-president, and Dr. A. T. Nadeau, secretary and treasurer.

Medical Society of the Tenth Councilor District of Arkansas.

The Northeast Arkansas Medical Society met at Fort Smith, March 24 and 25, and reorganized as the Medical Society of the Tenth Councilor District of Arkansas. Dr. E. G. McCormick, Prairie Grove, was elected president; Dr. John S. Shibley, Paris, vice-president; Dr. Frank B. Young, Springdale, secretary, and Dr. Buchanan Hatchett, Fort Smith, treasurer. A strong representation from every county in the district was present, and the society starts with the most flattering prospects for its future. This is the first councilor district medical society organized in Arkansas. It is to meet semi-annually, in March and September. The next meeting will be held in Fayetteville, September 29 and 30.

Denver Academy of Medicine.

After a year's preliminary work and agitation carried on by a few prominent members of the profession, the organization of the Denver Academy of Medicine was consummated Tuesday, March 31, 1903. The object of the academy, as expressed in its constitution is "the promotion of the science and art of medicine, co-operation among local medical organizations, the maintenance of a place for medical gatherings and the support of medical libraries." It is expected that in the near future the medical profession of Denver will possess a home of their own, where the various medical libraries and collections now scattered will be united under one roof, where all the medical societies of the city will meet, and a museum and laboratory for investigation and research will be maintained. The election of officers resulted as follows: President, Dr. Henry Sewall; vice-president, Dr. George B. Packard; trustees, 3 years, Drs. W. A. Jayne and W. W. Grant; 2 years, Drs. Thomas H. Hawkins and L. E. Lemen; 1 year, Drs. W. H. McLauthlin and I. B. Perkins; secretary, Dr. C. K. Fleming; treasurer, Dr. Frank E. Waxham; librarian, Dr. C. D. Spivak.

Kentucky County Societies.

The work of organization progresses in Kentucky, as is shown by the following record:

The physicians of Bailey County organized at Middlesboro, March 23, electing Dr. Leslie L. Robertson, president, and Dr. Macauley Arthur, secretary, both of Middlesboro.

The physicians of Taylor County met at Campbellsville, March 25, and after an address by Dr. Robert C. McChord, Lebanon, councilor of the district, organized a county society. Dr. Jefferson L. Atkinson and James B. Buchanan, both of Campbellsville, were elected respectively president and secretary.

The physicians of Knox County met at Barbourville, March 23, and after an address by Dr. Steele Bailey, Stanford, secretary of the Kentucky State Medical Society, organized a county society. Dr. Benjamin F. Herndon was elected president, and Dr. Granville H. Albright, secretary, both of Barbourville. This society promises to have every physician in the county enrolled in its paid-up membership before the meeting of the state society.

The physicians of Pendleton County met at Falmouth, March 31. After an address by Dr. J. E. Wells, councilor for that

district, a society was organized with Dr. J. H. Barbour, Falmouth, president, and Dr. John E. Wilson, Falmouth, secretary. The constitution proposed by the American Medical Association was adopted without change, and it was promised that every physician in the county would be enrolled in the membership before the next meeting.

The physicians of Simpson County met at Franklin, March 30, and after a talk by Dr. J. N. McCormack, Bowling Green, organized a county society, which promises soon to enroll in its membership every physician in the county. Dr. George W. Duncan, Franklin, was elected president; Dr. Morton M. Moss, Franklin, secretary, and Dr. James C. Douglass, delegate to the state association.

The physicians of Spencer County met at Taylorsville, March 26, and after listening to a talk by Dr. J. N. McCormack, Bowling Green, organized a county society, electing Dr. Henry C. Mathias, president, and Dr. Wiley Rogers secretary, both of Taylorsville. All but three of the physicians in the county were present.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, FIFTY-FOURTH ANNUAL MEETING, NEW ORLEANS, MAY 5-8.

Tennessee State Medical Society, Nashville, April 14-16.
Medical Association of Georgia, Columbus, April 15.
South Carolina Medical Association, Sumter, April 15-16.
Iowa State Medical Society, Sioux City, April 15-17.
Mississippi State Medical Association, Vicksburg, April 15-17.
Medical Association of the State of Alabama, Talladega, April 21.
Medical Society of the State of California, Santa Barbara, April 21.
Medical Association of the State of Missouri, Excelsior Springs, April 21-23.
Kentucky State Medical Society, Louisville, April 22-24, 1903.
Texas State Medical Association, San Antonio, April 28.
Louisiana State Medical Society, New Orleans, April 28-30.
Medical and Chirurgical Faculty of Maryland, Baltimore, April 28-30.
Nebraska State Medical Society, Lincoln, April 28-30.
Illinois State Medical Society, Chicago, April 29-May 2.
Arkansas Medical Society, Jonesboro, April 30-May 2.
Association of American Medical Colleges, New Orleans, May 4.
American Proctologic Society, New Orleans, May 5.
Kansas Medical Society, Concordia, May 6-9.
American Academy of Medicine, Washington, D. C., May 11-12.
American Therapeutic Society, Washington, D. C., May 11-13.
Oklahoma Territorial Medical Association, Guthrie, May 12.
American Association of Genito-Urinary Surgeons, Washington, D. C., May 12-14.
American Surgical Association, Washington, D. C., May 12-14.
American Orthopedic Association, Washington, D. C., May 12-14.
American Pediatric Society, Washington, D. C., May 12-14.
Association of American Physicians, Washington, D. C., May 12-14.
American Medico-Psychological Association, Washington, D. C., May 12-15.
American Ophthalmological Association, Washington, D. C., May 13-14.

Iowa State Medical Society.—The annual meeting will be held in Sioux City, April 15 to 17. At this meeting the adoption of the constitution suggested by the American Medical Association for state societies will be an important order of business.

Comanche County (Texas) Medical Society.—At the regular meeting held in De Leon, March 14, Dr. T. P. Weaver, De Leon, was elected president; Dr. Leven B. Thomas, Comanche, vice-president, and Dr. John D. Moorhead, De Leon, secretary and treasurer.

Breckenridge County (Ky.) Medical Society.—Physicians of Breckenridge County met at Hardinsburg, March 18, and effected a reorganization of the society, electing Dr. Robert T. Dempster, Glendeane, president, and Dr. Milton Board, Jr., Hardinsburg, secretary.

Westchester County (N. Y.) Medical Association.—At the annual meeting held at White Plains, March 26, Dr. Thomas J. Acker, Croton-on-Hudson, was elected president; Dr. William D. Granger, Bronxville, vice-president, and Dr. Donald T. McPhail, Purdy Station, secretary and treasurer.

Shawnee (Okla.) Physicians' Club.—About 20 physicians of Shawnee met, March 26, and organized a medical society whose principal object is the building of a hospital in the city. Dr. John A. Walker was elected president; Dr. Hugh Goodwin, vice-president, and Dr. A. T. Grayson, secretary and treasurer.

Woman's Medical School Alumnae Association.—The twenty-third annual meeting of the alumnæ of Woman's Medical School (Northwestern University) will be held April 29 in Chicago. The meeting has been so arranged as to allow the members to attend the meetings of the Illinois State Medical Society and the American Medical Association.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held March 25, 1903.

The President, Dr. William A. Evans, in the Chair.

Pneumococcus Septicemia.

DR. J. L. MILLER said that bacteriemia was a more suitable term than septicemia. Whether an infection remains localized or becomes generalized depends largely on the resistance of the individual and the virulence of the infectious agent. The *Diplococcus pneumoniæ* inoculated into a highly susceptible animal, as the mouse and rabbit, does not manifest itself as a localized process, but becomes a bacteriemia. In less susceptible animals, when inoculation is made directly into the lung, a process resembling pneumonia follows. Pathologic findings, animal inoculations and clinical observations indicate that pneumonia is often a septicemia before blood cultures actually demonstrate the organism. Two investigators report positive cultures from the blood in all cases examined; 154 cases collected from other reports show positive results in 24 per cent. The earliest positive results were obtained on the second day of the disease. Blood cultures will be of little diagnostic aid, as the disease is easily recognized from the physical findings. From a prognostic standpoint it is of value, a bacteriemia indicating a grave infection. Eighty-seven per cent. positive cases died, and only 22 per cent. of the negative cases.

The Diagnosis of Pneumonia.

DR. ARTHUR R. EDWARDS read this paper. He said that mistakes are rare in the diagnosis of primary frank pneumonia in adults. They occur mostly in the aged, alcoholics, children, and in pneumonia secondary to cancer, nephritis, diabetes, etc. Therefore, the physician should watch all diseases when the respiration, pulse and temperature rise, or when, even without these or other symptoms, the subject of chronic disease is not doing well The onset symptoms, the chill in adults, convulsions in children, vomiting in the very young or in adolescents, suggest at least the possible onset of lobar pneumonia. Chill, pain in the side, sudden high fever and rusty sputum are almost positively final, since pneumonia is practically the only disease where they occur, guarding against the chief diagnostic confusion, infarct of the lung, in which the same symptoms may obtain, although here the sputum is reddish, but is not viscid, and is usually far more abundant than in pneumonia.

As to diagnosis from the physical findings in the lungs, these findings are usually detected in the frank case of pneumonia on a thorough thoracic examination, and, as a rule, appear within two days after the characteristic symptoms of onset. These physical findings were detailed and a table was presented differentiating pneumonia from effusive pleurisy.

Pneumonia in children occurs with an abrupt onset without chill (before the seventh year), but with vomiting or convulsions or other cerebral or meningeal symptoms. Cough is absent, since the bronchi are not involved; no sputum appears, and pain from the third to the fifth year, or, indeed, later, and also in adults, is referred to the abdomen, but without tenderness there. Pain is more important than increased respiration, which occurs with any elevation of temperature. Respirations number 80 under 2 years; in older children 50 or over. Crepitant râles are usually absent because of the superficial breathing caused by pain. Latency of signs is sometimes noted, as no bronchial breathing, no bronchophony, no dulness. Localization is more often central, in the upper lobes or migratory. Lysis is more frequent than in adults. In children pneumonia may be mistaken for abdominal disease, for pleurisy or brain affections. In alcoholics the disease is insidious, often without pain, cough or sputum, etc., and the lung symptoms may be overlooked, since the clinical picture of delirium tremens masks the signs of pneumonia.

Pneumonia secondary to tuberculosis, emphysema, arteriosclerosis, hepatic cirrhosis, nephritis, diabetes, typhoid influenza, diphtheria, anesthesia by ether, etc., is most frequently overlooked and the greatest care in chronic cases is necessary. Sudden death here and in general is often pneumonic.

Of other variations in the clinical course, the author mentioned the rarer forms, as abortive pneumonia, ephemeral pneumonia, relapsing or recurrent pneumonia. He discussed delayed or imperfect resolution; also local variations, massive pneumonia, etc., and as a final general statement he said that few diseases are recognized as easily as is fibrinous pneumonia, when careful consideration is given to its onset, symptoms, signs and evolution, and when, no symptom of pneumonia presenting, the patients with other disease are carefully, systematically and repeatedly examined.

Treatment of Pneumonia.

DR. JAMES B. HERRICK referred particularly to certain erroneous practices in the treatment of pneumonia, and argued for a simpler therapy and less free use of drugs. The expectant and symptomatic treatment is, for the present, seeing no specific remedy is known, the only rational one. The physicians can educate the laity to a knowledge of the self-limited nature of pneumonia, and a treatment as scientific as that in typhoid will be possible. He urged that oxygen be allowed to come in through the window, and not given entirely from the tank. No hard and fast rule as to diet should obtain; there should be individualization in this regard. Alcohol is seldom necessary. Hydrotherapy is proper for the reduction of temperature. Salt solution is of value, but its use ought not to be deferred until the patient is in extremis. Morphin is the best remedy to relieve pain and induce sleep, though it should, of course, be used with caution. Local applications are of doubtful value. They should not be so heavy or so light as to embarrass respiration. Bleeding is occasionally of benefit. The giving of many drugs for each trifling symptom is not indicated, and is often harmful. There is danger in the too free use of stimulants.

Discussion.

DR EDWARD F. WELLS stated that he had collected series of cases from the literature, which have been recorded during the past one hundred years, this table embracing at the present time about 400,000 cases, with a mortality rate of 22 per cent. or more. He believes the mortality of pneumonia is understated rather than over-stated.

In speaking of the diagnosis of pneumonia mention is frequently made of central pneumonias and the difficulty attending the diagnosis of these forms of the disease. A patient in full health is stricken by disease which prostrates him. He may lack cough and expectoration, still there may be fever, which is usually present. The prostration, the increased respiratory ring, the presence of leucocytosis of a peculiar character, the leucocytosis being due to an increase of polynuclear cells, would make the diagnosis clear to his mind in many cases in which the physical signs are in abeyance. He called attention to one observation which he has made, namely, that in cases of delayed physical signs, in the so-called central pneumonia, when the signs appear, one would find that almost invariably they are a little in front and just below the angle of the scapula. Casts are frequently found in the urine in pneumonia. Granular casts of pneumonia are remarkably uniform in size. He believes patients are usually fed too much in pneumonia. Pain in pneumonia declines in about three days, or subsides, regardless of what is done to relieve it.

DR. E. FLETCHER INGALS said the importance of not cutting off air is a point that should be impressed on all physicians in treating pneumonia. Pneumonia patients should not be fed in a routine manner. The proper administration of food is often neglected, and physicians frequently overlook the matter of feeding of the patient. He agreed with the essayist that opiates must be given if pain can not be relieved in some other way. Ordinarily, he believes bromid of ammonium will relieve insomnia if the drug is given early enough.

DR WALTER M. FITCH asked whether the antitoxin of pneumonia was of any value. Also, whether nuclein preparations are of any value in pneumonia other than producing a leucocytosis.

DR. EDWARD H. OCHSNER spoke of systematic strapping of the affected side in cases of pneumonia. In the great majority of cases that are thoroughly strapped early in the disease, the pneumonia disappears by lysis and not by crisis. His explanation is that the intoxication is not so sudden and severe, and it gives the patient a chance to produce immunity before he is completely intoxicated so as to cause death.

DR. M. HERZOG stated that pneumococcus septicemia is difficult to diagnose, but that this difficulty is largely done away with if a blood examination is made early, and attempts made to obtain pure cultures of the pneumococcus in the blood.

DR. B. W. SIPPY stated that cases that have the normal number of leucocytes, or less, were more likely to run a serious course.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 19, 1903.

The President, Dr. Andrew H. Smith, in the Chair.

Fetal and Infantile Typhoid Fever.

DR. J. LOVETT MORSE, Boston, said that conclusions could not be considered trustworthy that were founded on cases in which the diagnosis of typhoid fever had not been confirmed by a positive Widal reaction or the finding of the typhoid bacilli. Of fifteen cases, proved by autopsy and cultures to be genuine typhoid, ten were born dead or died at birth. Several persons had succeeded in proving experimentally the possibility of bacilli passing through the placenta, though it was not yet definitely known whether this could occur in a healthy placenta. Of twelve cases in which the organs were examined, the spleen was enlarged in four; in one there were healed ulcers and enlarged mesenteric glands; in one there was marked swelling of the liver with hemorrhages beneath its capsule. Intestinal lesions were not found in cases of intrauterine typhoid unless the infant lived for some time after birth. Infection of the fetus was not a necessary result of typhoid in the mother. The high mortality was explained by the septicemic nature of the infection. Statistics seemed to show that typhoid was uncommon at the age of 2 years, and that when it did occur at this early age it was in connection with other cases in the same house, or as a part of a large epidemic, thus suggesting that repeated exposure to severe infection was necessary for its production. Of thirty-two cases, twenty-three gave a positive Widal reaction, five were diagnosed positively by a bacteriologic examination, while in four cases both methods were employed. Sixteen of these cases giving a mortality of over 50 per cent. Of these sixteen, a typhoid eruption was present in sixteen, eleven showed abdominal distention, nineteen had diarrhea and five constipation.

Occurrence of Typhoid in Infants and Young Children.

DR. J. P. CROZER GRIFFITH, Philadelphia, presented this paper. He said the opinion was gaining ground that typhoid was not rare in infancy and childhood, and he had personally reported eighteen cases occurring in infants under two years and a half. Its onset and course were less characteristic than in the adult, and there was a tendency for the nervous symptoms to overbalance the intestinal symptoms. Walking typhoids were very common among these little patients. Vomiting was a comparatively common initial symptom, and epistaxis occurred about as often as in adults. Abdominal pain was common, rose spots were present in the majority of cases, and the spleen was probably always enlarged. Desquamation often occurred, but there was nothing characteristic about it. Meningeal symptoms were often so marked as to confuse the diagnosis. The rise in temperature was rapid, with but little variation between the morning and evening, and the final fall was often so sudden as to appear critical in type. Both the mesenteric and the solitary glands were enlarged and elevated, but the tendency to intestinal ulceration was slight, which apparently explained the short duration of the disease. The value of the Widal reaction was inestimable in doubtful

cases occurring among infants and young children, but the failure to obtain this reaction did not necessarily exclude typhoid. It was particularly difficult to differentiate between influenza and typhoid. Intestinal hemorrhage was an infrequent complication and intestinal perforation was a great rarity. Relapses occurred about as often as in adults. Of 137 cases occurring in the Children's Hospital in the ten years prior to 1898 the mortality was 2.9 per cent., and in 295 cases occurring since 1898 it was 6.7 per cent. On the other hand, in a large series of cases of typhoid occurring in infants under two years and a half the mortality was 51 per cent. The Brand baths could not be fully employed in young children; even a plunge at 85 or 90 F. was often not well borne. Sponging should be tried first, and, if not sufficient, resort should be had to the graduated bath, beginning with a temperature of 90 and cooling it down to 85 F.

Symptoms and Etiology of Typhoid in Children.

DR. A. D BLACKADER, Montreal, read this paper. He said that hand to hand infection was particularly prone to occur among young children. Out of 398 cases entering the Montreal General Hospital since 1900, 4 were below the age of 5 years, 19 were between 5 and 10, 32 were between 11 and 15, 89 were between 16 and 20, and 92 between 21 and 25 years of age. Only 3 cases occurred in persons over 50 years old. Of 100 cases reported by him in 1900, 4 were under 2 years, 13 were over 2 and under 6, 40 were over 6 and under 11, and 43 were over 11 and under 15 years old. The disease in children was milder in type and shorter in duration than in adults. The onset sometimes simulated pneumonia, but usually it was insidious. The temperature curve was usually atypical, and the continued fever of short duration. Abortive cases were not infrequent. The mortality was low; only one death occurred in his series of 100 cases, and in 50 consecutive cases in hospital there were only three deaths. Death usually was caused by some intercurrent affection. About the end of the first week the spleen could usually be palpated, and the typhoid roseola would be found in a large proportion of cases between the tenth and fourteenth days. Large ecchymotic spots on the skin justified an unfavorable prognosis. The pulse was usually rapid, but dicrotism was hardly ever observed in children under 10 years old. True meningitis in the course of typhoid was extremely rare. Ehrlich's diazo reaction, when present, was often an early help to diagnosis. The Widal reaction should be looked for every second day in doubtful cases. It was frequently not positive until after the tenth day.

Discussion.

DR. L. EMMETT HOLT said that Dr. Griffith's opportunities for observing typhoid in infancy and childhood were exceptional. For example, in his hospital service at the Babies' Hospital, although examinations for the Widal reaction and cultures were made as a matter of routine in cases of continued fever, only three cases of typhoid fever had been encountered in a period of fourteen years. Undoubtedly typhoid was more a nervous than an intestinal disease in infants, and, hence, it was well to think of typhoid in every suspected case of meningitis. He had seen two or three cases in which the typhoid eruption was so profuse as to lead to the diagnosis of measles.

DR. W. P. NORTHRUP spoke of the great rarity of typhoid fever in infants, as shown by the fact that not a single undoubted case of this disease had been encountered at the New York Foundling Hospital in twenty-eight years. Moreover, Dr. Griffith had only succeeded in collecting from the literature of the whole world a comparatively insignificant number of cases.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, held March 3, 1903.

President Dr. William Egbert Robertson in the Chair.

The retiring president, Dr. Wendell Reber, made an address, in which he reviewed the work of the society during the past year.

The Early Diagnosis of Pregnancy.

DR. J. J. GURNEY WILLIAMS directed attention to the frequency with which this condition is overlooked during the first ten weeks, owing to the atypical symptoms presented. He recommended careful bimanual examination and observation of both the objective and the subjective signs. In the majority of cases he feels that the patients are led to consult the physician on account of the amenorrhea, for which there are many other causes than pregnancy, which causes he considered under three heads: 1. Those cases in which menstruation has never taken place, which, he felt, was most likely to be caused by some defective development of the uterus or ovaries or some constitutional states, such as chlorosis, anemia or phthisis. In many of these cases menstruation does not begin until the assumption of marital relations.

2. In the second and the largest class of cases the menstruation has been suppressed. Previous regularity or irregularity and a history of any pelvic operations should be considered, as even dilatation and curettement may cause one or two periods to be missed.

3. In the third class the blood is retained within the uterine cavity or vagina, as from atresia or imperforate hymen, and a physical examination will reveal the condition. Among the various causes for the suppression of menstruation are change of climate, as the country girl coming to the city and starting to work in a mill, fear of illicit pregnancy, desire for offspring, great mental activity, catching cold or getting the feet wet just prior to an expected period. The use of bromids in epilepsy is also said to cause this condition, and two cases had come under the author's observation which had suffered from amenorrhea for two months after using a mixture of zinc sulphate and digitalis "to prevent smallpox." Supra-involution following labor or miscarriage and injections to prevent conception may also cause this condition, and, as a point of diagnostic import, it should be borne in mind that amenorrhea arising from any other cause than pregnancy usually manifests itself in some constitutional disease, such as anemia, general debility and weakness.

The mammary signs are not constant and often misleading, but in pregnancy the nipple is usually more prominent, the areola darker, and Montgomery's tubercles enlarge, and if, in combination with these symptoms, there is frequent micturition, this is a valuable adjunct to diagnosis. Nausea varies greatly in time and severity.

The author felt that the most important reliable objective symptom is the change in the shape of the uterus, which in the virgin is pyriform, but when pregnancy occurs the fundus rapidly enlarges and changes in form, and, as this examination can only be made between uterine contractions, repeated examinations may be necessary to find the uterus at rest. Hagar's sign in conjunction with the other symptoms is very valuable after the second month; softening of the cervix is not constant and may be caused by metritis. The bluish discoloration of the vagina just posterior to the urethra can be observed as early as the fifth week and is of considerable value, and when produced by a fibroid or pelvic congestion is of a lighter blue. A cervix lower than normal and increase in weight of the uterus are important symptoms, and salivation, stimulated or perverted appetite, a feeling of drowsiness and constipation are common symptoms, although valueless except in conjunction with others.

In regard to the diagnosis of ectopic pregnancy, in every case in which there is vaginal bleeding, or abdominal or pelvic pain, and the woman is presumably pregnant, a careful bimanual examination should be made, as the cases of this condition in which the diagnosis is not made are those which do not present the typical symptoms, such as sudden onset of pelvic pain, accompanied by a bloody discharge, with shreds, a leaky skin, rapid pulse and, probably, tympanites

Discussion.

DR. WALTER F. WOODS directed attention to three classes of cases, in which he had found it exceedingly difficult to make an authentic early diagnosis of pregnancy: 1, Pregnancy occurring during lactation; 2, amenorrhea occurring during the progress of some debilitating disease; and 3, where the patient

intentionally tries to deceive the physician. The cause of the difficulty in the first group is that the uterus is somewhat involuted following delivery, requiring from six weeks to three months to return to normal, and if amenorrhea occurs during this period, the abnormal position of the uterus is apt to conflict with the differential diagnosis. In the second class of cases, it is necessary to study all the symptoms which the primary disease might produce and make a diagnosis chiefly by exclusion. Cases of the third class require careful investigation, as they are prone to give a false history of the menstrual periods and other symptoms. The patient's history should be carefully noted and considered in conjunction with the physical examination, which should be made in all cases, and a familiarity with the patient's habits, mode of thought and the physical condition of her genital organs is of value, which places the family physician in a better position to make the diagnosis than one who is called in for that especial purpose.

The nervous phenomenon manifested should be given consideration, as in many instances a naturally nervous patient will become of a composed temperament during the first few weeks of pregnancy, and one who usually has a placid disposition will frequently become very irritable. The reflex gastric disturbance which may occur at different times during the day is a valuable symptom, and usually before the morning sickness appears there is an undue craving for certain articles of food, while the appetite, as a whole, may remain about normal. In many instances flesh is assumed quite rapidly. To the family physician who is familiar with the shape and position of the patient's uterus, the change in the position and size during the first few weeks of pregnancy may be an important aid in diagnosis. Another important factor is the softening of the cervix, and, while this occurs at each menstrual period, it disappears shortly thereafter unless a pregnancy has taken place, in which event it is continuous. This sign is especially valuable in primipara, while in multipara the variation in the cervix from lacerations, etc., frequently obscures the Hagar sign. The condition of the mammary gland, such as deepening of the color of the nipple and enlargement and pricking sensation in the gland are signs which should be studied in conjunction with the others.

One of the most valuable signs, he considered, was the irritable bladder, and, although the menstruation frequently causes a more frequent desire to pass urine, the condition is continuous if caused by pregnancy. The purplish or bluish condition of the vagina should be looked for, and although this may be brought about by pathologic states, it usually occurs earlier in pregnancy than in the other conditions, the reason being that in pregnancy the blood is brought to the uterus primarily, while the pathologic conditions simply dam up the blood in the uterus so as to produce this sign. Shaeffer's sign, he stated, he had never been able to demonstrate.

DR. J. THOMPSON SCHELL viewed as the most important symptom the marked anteflexion of the uterus which is usually present. He felt that by carefully considering the added weight to the uterus, the increased amount of vaginal and cervical secretion, with beginning softening of the cervix, the fact that the cervix is generally partially prolapsed, the uterus further down in the pelvis and heavily supported, and by careful vaginal and rectal examination and the so-called Hagar's sign one can say that the woman is probably pregnant. The beginning of a violet color in the vagina later becoming blue is of value, and by three or four examinations, at intervals of a week, the diagnosis should be made with reasonable certainty.

In ectopic pregnancy, an early diagnosis is of vital importance, and this condition may exist without the presence of any of the customary signs, and the only symptom may be shock. It was recommended that in all cases where the patient complains of amenorrhea, pain in the abdomen and a little leaking from the vagina, that she be examined under an anesthetic. A case was reported of a woman who had been married for a number of years; had been sterile for seven years, and up to one month prior to the time she was seen had menstruated regularly without pain, at which time she missed a period. There was some pain in the lower portion of the abdomen, but no great evidence of shock and her temperature was normal. An examination under an anesthetic was decided on, a vaginal examination made, and an ectopic pregnancy discovered.

In regard to Shaeffer's sign, it was considered absolutely unreliable, except in conjunction with other symptoms, and in the majority of cases was believed to be absent.

DR. SAMUEL WOLFE believed it practically impossible to make a positive diagnosis in the early months, but felt that the family practitioner who was more or less familiar with the physical condition and history of his patients could generally be fairly certain of his diagnosis.

DR. W. WAYNE BABCOCK reported cases, the first of which was a woman who had been sterile for eight years, and had been operated on for laceration of the cervix, after which she developed retroversion of the uterus, which gave her a great deal of trouble, operation being advised to relieve this condition. This was, however, deferred for a number of months, and finally she missed a period and passed eight weeks over her time, when an examination revealed the uterus in a retroflexed position, with the fundus very large and soft and the cervix very small, leading to the conclusion that she was pregnant. On re-examination a week or two later, the mass was found to be somewhat larger, but, by feeling carefully, could be felt what appeared to be the normal fundus, and a division was apparent between the mass behind the uterus and the cervix. Pain in the pelvis was complained of and a week or two later, extra-uterine pregnancy being suspected, an operation was suggested. On opening the uterus what was supposed to be the fundus of the uterus was found to be a small fibroid, the whole uterus being studded with fibroids and, as they were directly in the path of the child and were growing rapidly, the whole organ was removed.

Another woman had been wearing a stem-pessary for two years to prevent conception, removing it during the menstrual period. The pessary was slightly longer than was necessary. She complained of constant bleeding, which she seemed unable to stop. She had a distinctly enlarged and soft uterus, but pregnancy was not thought of. A curettement was done, and the character and amount of material removed indicated that a pregnancy had taken place, in spite of the precaution, which the speaker thought would create a good field for the development of malignant disease.

DR. WILLIAM L. PEPPER stated that he had frequently noticed that women in whom sexual desire is very great before pregnancy will lose all desire during gestation, while those in whom sexual desire is not usually so great, will become abnormally sexually excited during pregnancy.

DR. J. EDWARD WALLIS felt that there were no signs sufficient to make a positive diagnosis until the end of the third month.

DRS. L. C. PETERS, I. C. GERHARD, W. H. THOMAS and HUGH P. MCANIFF also took part in the discussion and reported cases. One of these was of menstruation throughout pregnancy, others were of difficult diagnosis in wasting diseases.

DR. CARLE LEE FELT reported the case of a woman who had borne three children, examination after the birth of the third child revealing laceration of the cervix. A curettement was done, and a short time afterward she stated to her physician that she was two months pregnant. Seven months after this she was delivered of a full term child, which proved that she must have been pregnant at the time of the operation.

DR. J. H. GURNEY WILLIAMS stated that he had made a number of observations with the urine of pregnant patients, and had found that after the first twenty-four or forty-eight hours a skin-like substance would form on the top of the urine, and if it was held up to the light particles could be seen rising therefrom. This he had not observed in any urine except in cases of pregnancy. The history and symptoms he believed to be practically worthless, unless confirmed by the examination. Pinkish vaginal discoloration just posterior to the urethra is a sign of considerable value.

The vaginal incision in ectopic pregnancy is not wise, as in the majority of cases it necessitates two incisions in order to control the hemorrhage.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Pruritus.

Leredde, in the "Journal des Praticiens," advocates the use of acetic acid in the following combinations:

℞.	Acid. acetic.....gr. xx	1	30
	Lanolin.....3i	4	
	Vaselin.....3iii	12	
M.	Sig.: Apply locally; or:		
℞.	Acid. acetic.....gr. xx	1	30
	Vaselin.....3ii	8	
	Lanolin.		
	Pulv. amyli, āā.....3iii	12	
M.	Sig.: Paste; apply locally.		

He also suggests the use of carbolic acid in one to three per cent. solutions on compresses.

Tincture of benzoin may also be employed in the following combination:

℞.	Lanolin.....℥i	30	
	Vaselin.....3iv	15	
	Aquæ.....3i	4	
	Tr. benzoini.....3i	4	
M.	Sig.: Ointment; apply locally.		

Camphor is an excellent anti-pruritic and may be used in either of the following prescriptions:

℞.	Chloral hydratis.....gr. xv	1	
	Linimenti camphoræ.....3ii	8	
	Lanolin.....℥iii	90	
M.	Sig.: Ointment; apply locally; or:		
℞.	Zinci oxid.		
	Cretæ		
	Linimenti camphoræ		
	Aq. calcis, āā.....3vi	25	
M.	Sig.: Apply locally.		

The author also recommends a weak watery solution or ointment of ichthyol, one or two drams to the ounce. He has also found resorcin a remarkable anti-pruritic when employed in watery or alcoholic 2 to 5 per cent. solution.

Cough.

A prescription which has proved valuable, especially in case of young children, is as follows:

℞.	Codein. sulphatis.....gr. vi		40
	Sp. aeth. nitrosi		
	Syr. ipecac., āā.....3ii	8	
	Syr. lactucarii (Aubergier) q. s. ad....℥iii	90	
M.	Sig.: Half teaspoonful to one teaspoonful as required for cough.		

In the irritating cough which so often follows influenza the following preparation is recommended in the "Canadian Journal of Medicine and Surgery":

℞.	Heroin. hydrochloratis.....gr. iii		20
	Syr. acaciæ.....3vi	25	
	Aquæ q. s. ad.....℥iv	120	
M.	Sig.: Two teaspoonfuls 3 or 4 times a day.		

Alcohol in Fevers.

Martinet, in "La Presse Médicale," gives a formula which is intended to serve as a guide in the rational administration of alcohol in fevers, whereby the tissue waste may be forestalled:

℞.	Tr. cinnamomi.....3i	4	
	Sp. sacchari (old)		
	Syr. simplicis, āā.....℥iii	90	
	Aq. tileæ (Linden water).....3x	40	
M.	Sig.: Tablespoonful every two hours.		

The "Canadian Journal of Med. and Surg." recommends this editorially and urges that it certainly would be satisfactory to the practitioner, and should be in the best interests of the patient and his family, if alcohol, accurately measured according to the requirements of the individual, were administered as carefully as any other medicine. If the patient has scruples against liquors, medicinal dosage, as in the prescription quoted, may avoid unpleasantness.

Carbolic Acid for Erysipelas.

Seneca D. Powell, New York, applies 95 per cent. carbolic acid in erysipelas, and as soon as the skin turns white he applies alcohol to check the action. Large surfaces may be thus treated without harm. Temperature and other symptoms are rapidly and markedly alleviated. This treatment also lessens the danger of infection to others.

The "Dietetic and Hygienic Gazette" describes another treatment for erysipelas. It is to cover the area and a margin on the surrounding skin with a thick layer of white vaselin, cover this with linen and bandage to hold it in place. Apply twice daily. Its advantage over iodin applications is the absence of pain and irritation.

Removal of Odors from Hands.

Dr. Powell also recommends carbolic acid to remove the foul odors that cling to the hands after opening abscesses or after work in autopsies. The acid should be used in the strength of a dram to the ounce of water.

Typhoid Fever in Infants.

J. P. Crozer Griffith, in the "Medical Record," says: The bath method of Brand carried out with exactitude is not applicable to young children. Even a tepid plunge of 85 or 90 F. is often not well borne by older children. His custom is to employ sponging first, because it is often sufficient; if not, a graduated bath is used, beginning at 90 F. and cooling it down to 85 F. This is the safer plan. Sometimes a warm bath of 95 or 100 F. is useful, and the same is true of the abdominal ice-bag. Hydrotherapy should never be used in young children as a necessary routine, and the prolonged sponging of a struggling child is neither useful nor judicious.

Codein in Insanity.

In a recent Paris thesis by Jules Clausse, says the "N. Y. Med. Jour.," the author sets forth the great advantages of the employment of codein as a calmative in cases of melancholia and in those of any psychical disturbance characterized by derangement of the general sensibility, by anxiety, and by moral suffering. Its effect, he says, is soon manifested in the improved facial expression and the subsidence of the feelings of moral anguish. For melancholiacs it is the hypnotic par excellence, since it overcomes the causes of their sleeplessness. Moreover, it is devoid of the unpleasant after-effects of opium and morphin. It does not diminish the secretions or cause constipation or the impairment of appetite or the unpleasant sensations on waking that opium and morphin are prone to give rise to. The dose, however, must be scrupulously regulated to suit the case, and the drug is positively contraindicated in cases of intense excitement and in maniacal conditions.

A Mouth Wash.

Pruyn recommended to the Illinois Dental Society the following as a mouth wash:

℞.	Boracic acid.....3iii	12	
	Oil cassia		
	Carbolic acid		
	Chloroform, āā.....3i	4	
	Alcohol.....℥iiiss	105	
	Oil peppermint, ...drops x		65
	Glycerin, to make..... fl. ℥viii	240	
M.	Sig.: Add one-half teaspoonful to one-half glass tepid water as a mouth wash.		

This is recommended in inflammation of the mucous membrane wherever located, but if used through the nose it should be weaker than for a mouth wash.

The Abuse of Lavage of the Stomach.

The "N. Y. Med. Jour." says: New therapeutic measures that in the least answer the purposes they are alleged to serve are too apt to be carried to extremes, and it is well when modera-

tion in their employment is advised. This may be said, we think, of lavage of the stomach. It is not always the innocent procedure that it passes for, as it occasionally gives rise to collapse. It should be resorted to only on definite indications and employed in moderation.

Influenza.

Hare's text-book on therapeutics, last edition, gives a valuable summary of the treatment of influenza. Some of the suggestions are as follows:

To abort the attack in first few hours:

℞.	Tr. aconit. rad	℥ss	2
	Spts. ætheris nitrosi	℥iii	4
	Potassii citrat	℈iii	4
	Aquæ q. s. ad	℥i	30

M. Sig.: One teaspoonful every four hours, during first day of the attack.

For the irritative cough in first stage:

℞.	Tr. benzoini comp	℥i	4

Sig.: Add to one pint of boiling water, and inhale the steam.

For the cough in the height of the attack:

℞.	Ext. cannabis ind	gr. ¼-i	.015-.6

Or:

℞.	Codeinæ sulph	gr. ¼-i	.015-.6

Sig.: Every three or four hours.

For the bronchitis in the early stage:

℞.	Vini ipecac	℥ii	8
	Potassii citratis	℥ii	8
	Syr. pruni virg	℥ii	60

M. Sig.: One teaspoonful every two hours.

For the bronchitis in the later stages:

℞.	Ammon. chlor	gr. xl	3
	Tr. cubebæ	℥i	30
	Syr. pruni virg. q s. ad	℥iv	120

M. Sig.: One tablespoonful every three hours.

For the insomnia:

℞.	Chloral hydratis	gr. xv	1

Or:

℞.	Chloralamid	gr. xxx	2

Or:

	Sulphonal	gr. xx	1.3

Sig:. At one dose.

For stimulation, throughout the attack:

℞. Strychninæ sulph. up to .03 (gr. 1/20).

Sig.: Every four hours. (It is preferable to use smaller doses more frequently, e. g., gr. 1/40 every two hours.)

For the vertigo and dizziness:

℞.	Ext. ergotæ fld	℥ss	2
	Sodii bromidi	gr. xx	1.4

M. Sig.: Take at one dose; repeat q. 3 hours.

For the constipation in the early stages:

℞.	Castor oil	℥ss	15

Or:

℞.	Magnesii sulph	℥ss	15

Or:

℞.	Magnesii citratis	℥ss	15

Sig.: at one dose.

For the constipation after the attack: One teaspoonful of fluid extract of cascara at night.

Anders suggests for the laryngobronchial irritation of influenza:

℞.	Codeinæ sulph	gr. iv	.25
	Ammon. chloridi	℈xv	20
	Syr. pruni virg	℥ii	60
	Spts. junip. comp. q. s. ad	℥iv	120

M. Sig.: One teaspoonful every two or three hours.

The Internal Uses of Potassium Permanganate.

A. Khoury reports, in the "Jour des Praticiens," as quoted by "Amer. Med.," four patients with painful dysmenorrhea who were cured, and three patients with anemia greatly improved by the administration of potassium permanganate. It was given in doses of from 5 centigrams to 0.26 gram. (5/6 to 4 grains) usually in pills, which have the advantage of not staining the mucous membrane of the mouth. In all cases this drug was well borne by the stomach. It caused no constipation or diarrhea; in only one case was the urine tinted a light pink. Menstruation does not counterindicate its use.

Medicolegal.

Reading or Proving Contents of Medical Works to Jury.—The furthest that the Supreme Court of Illinois has gone in respect to reading medical works to the jury, the Appellate Court of Illinois, First District, says, is to hold that if an expert bases his opinion on the work of an author, the work may be read in evidence to contradict him. And if it would not have been competent for counsel to produce and read to the jury medical books, much less was it competent, the Appellate Court holds, in the case of the Chicago City Railway Company vs. Douglas, to attempt to prove the contents of such books by witnesses testifying solely from memory. The testimony of medical expert witnesses as to what others had written or spoken in regard to the subject matter of the inquiry, was mere hearsay, and incompetent.

Care of Soldier in Private Infirmary.—The case of Davis vs. United States was brought in the United States District Court in Alabama to recover the reasonable value of the board, lodging, medicines, medical attention and nursing of a soldier in the service of the United States who was taken ill with typhoid fever and was by the direction of his captain conveyed to a private infirmary for medical treatment and attention, there being no army surgeon near the place whose medical services could be obtained for him, and no army hospital to which he could be sent. Section 1452 of the army regulations, promulgated Oct. 31, 1895, provides that: "When medical attendance is required by an officer or enlisted man on duty, and the attendance of a medical officer can not be had, the officer, or if there be no officer present, then the enlisted man may employ a civilian physician. and a just account for his services and the necessary medicines will be paid by the medical department." Section 1457 provides that "accounts for board, lodging, nursing and medical attendance of sick soldiers in private hospitals will be sent to the surgeon-general for settlement." But in this case there was no valid express contract, as required by act of June 2, 1862, for the services rendered. However, the court is of the opinion that the captain acted within the line of his authority under the army regulations, in sending the sick soldier to the infirmary, from which there arose on the part of the United States government an implied contract to pay the fair value of the services rendered, as claimed.

Not Required to Have Limb Rebroken and Reset.—In the malpractice case of Morris vs. Despain, where a judgment for damages is affirmed by the Appellate Court of Illinois, Second District, a woman 69 years of age, in good health, fell and suffered an oblique fracture of the left femur, two or three inches below the hip joint. Two physicians attended her. They reduced the fracture and put on a roller splint. When they discharged her the injured limb was inverted or turned in toward the other, according to her proof, ninety degrees, but according to that of the physicians only twenty-five or thirty degrees. She claimed that the condition of her leg was brought about by careless and unskilful treatment. The physicians claimed that they exercised care and professional skill, and that what they did was good practice; that prior to the use of the fracture box they desired to use a system of weights to avoid the injury complained of, but that the patient would not permit them to do so, and that she also disobeyed their instructions. Two trials were had; the first resulting in a verdict for $1,000 damages; the second for $950. On the questions whether she obeyed instructions, and whether the treatment pursued was the proper treatment to prevent inversion or not, the court says that the evidence was in hopeless conflict, but that there was abundant to sustain the verdict. After the union between the bones was complete and the patient had discovered the condition of her leg, she requested that an-

other physician be called in. This physician being called, advised that the only way by which the limb could then be straightened would be by breaking the bone and resetting it, but this the patient declined to allow to be done. The trial judge gave an instruction for her which told the jury that even though they should believe, from the evidence, that the limb might have been straightened by being broken again and reset, yet if the evidence showed that by reason of the want of ordinary care and skill on the part of the two physicians, the limb was permitted or caused to be crooked, and that ordinary skill and care on their part would have avoided the injury, her refusal to have her limb rebroken and reset was no defense to any injury caused by their want of ordinary skill or care. The Appellate Court holds that the instruction was properly given. It holds that she was not required to submit to have her limb rebroken in order to relieve them from liability for lack of ordinary care and skill. Moreover, there was evidence tending to show that such an operation would be attended with great pain and that at her age and in her physical condition there was great danger that it would prove fatal to her. The law did not require her to risk such danger before she could sustain her suit.

Mississippi Medical Practice Act and Osteopathy.—In the Mississippi case of Hayden vs. State the former party was indicted for practicing as a physician without first having been examined and obtained a license so to do. The admitted facts were that he was a graduate of a school of osteopathy and practiced it. That in treating diseases, and in his treatment of the witnesses for the state in this case he did not use any drug or medicine, but his treatment consisted of manipulating scientifically the limbs, muscles, ligaments and bones which were pressing on the nerves of the blood supply. This treatment was had so that Nature would have free action. That in his treatment of diseases or pains he was confined solely to his manipulation as above described. That for said services to said witnesses he received pay. That the witnesses were being treated for rheumatism, and claimed that they had entirely recovered as a result of that treatment. The circuit judge instructed the jury that, if they believed the admitted facts, they should convict the party. This they did, and thereon the judge imposed a fine of $20 on him. The Supreme Court of Mississippi says that the sole question was whether, under Chapter 68, Acts 1896, an osteopath is required to be examined and licensed for the practice of his branch of the healing art. The act of 1896 provides: "That the practice of medicine shall mean to suggest, recommend, prescribe or direct for the use of any person, any drug, medicine, appliance or agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound or fracture or other bodily injury or deformity or the practice of obstetrics or midwifery, after having received, or with the intent of receiving therefore, either directly or indirectly, any bonus, gift, profit or compensation." It was perfectly manifest, the court thinks, from the agreed statement of facts, that the party used neither drug nor medicine, as meant by the act. It was equally manifest that the legislature, by the use of the words "appliance and agency," did not intend to include such treatment as he gave the state witnesses. Continuing, it says that its attention has been called to no statement of osteopathic treatment in all the literature on this subject which characterizes the treatment of an osteopath of his patient as an appliance or agency. There is an incongruity in such application of such words. Osteopaths themselves do not speak of their manipulation of the nerves, ligaments, bones and other parts of the human body as being agencies or appliances of any sort or in any sense. In any strict and proper use of such words they can not be so denominated. If one not an osteopath directs a blow at their art it is becoming that he use a term of description not to be mistaken. The Supreme Court concludes that the act of March 19, 1896, was not intended to regulate the practice of osteopathy in Mississippi. It says that the course of study and examination prescribed in the law of that state on this subject seems to mark it out as curriculum of the allopaths. It at least suits them in many respects, but its chemistry and materia medica are not specially adapted to assist the practice of osteopathy. They make no use of the immense learning contained on these subjects, so highly valued by the regular physician. It appears to the court that the Mississippi legislation on the subject of the practice of medicine has been framed by the allopaths to suit their views of the medical art, and with the laudable design of excluding from the practice the unskilful and the ignorant; and it was not intended to set up a universal standard of therapeutics, from which none could depart. Courts in other jurisdictions where similar statutes prevail have led the way for the decision in this case. And the court says that while its own views of the subject would probably have led it to the conclusion it has reached, yet, if the case had been otherwise, it should have felt itself strongly constrained by the authority and reasoning contained in them. It refers to State of Ohio vs. Liffring, State of Rhode Island vs. Mylod and Nelson vs. Board (Kentucky). Alabama, with a statute widely divergent from that of Mississippi, it says, holds another view. But Bragg vs. State of Alabama sheds no light on the construction of the Mississippi statute. It adds that a wise legislature some time in the future will doubtless make suitable regulations for the practice of osteopathy, so as to exclude the ignorant and unskilful practitioners of the art among them. The world needs and may demand that nothing good or wholesome shall be denied from its use and enjoyment.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

March 28.

1 *The Psychic Nature of Some Disturbances of the Acts of Urination and Defecation. Charles J. Aldrich.
2 *The Prevention and Outdoor Treatment of Pulmonary Tuberculosis. Frank Warner.
3 Postpartum Subinvolution. James E. King.
4 *Course of Diseases During Pregnancy. E. Castelli.
5 *Gastroptosis and Gastrectasis. E. S. Fogg.
6 A Diagnosis by Postmortem Laparotomy. C. A. Drew.
7 Glimpses of the Practice of Medicine and Diseases in the West Indies. (To be continued.) Nicholas Senn.

1. Psychic Disorders of Urination, Etc.—In this article Aldrich reports a number of cases of curious psychic embarrassment connected with the acts of urination and defecation, the latter being far less frequent than the former. He thinks innate modesty may be sufficient to explain the condition in some of these cases, but others are not so readily explained.

2. Tuberculosis.—The subject of tuberculosis is reviewed by Warner, who notices the theory of its contagion, though with proper care, this can be of but little importance. The lowering of vital resistance is undoubtedly the greatest cause of vulnerability to the infection which few altogether escape. He reviews the various methods of treatment, and notices the arguments that would make bovine tuberculosis infectious to human beings. There is a good deal of hopefulness in Behring's antituberculosis vaccination, though as yet it is too early to decide in regard to its efficacy.

4. Diseases of Pregnancy.—Castelli reviews the circulatory and heart lesions that may be associated with pregnancy and thinks that the physiologic condition may possibly explain the tendency to primary heart lesions, hence, we should adopt prophylactic measures during pregnancy to guard against their possibility. The patient should have a great deal of rest, especially if weak and anemic, and lack of exercise must be substituted by massage. To counterbalance the impaired respiratory power of the blood corpuscles and the consequent hemolysis, a cytogenic treatment could be adopted during the last months of pregnancy. The influence of pregnancy on any coexisting heart disease is also noted. It renders the existence of these disorders more serious and often disastrous. He would be inclined to advise against marriage more in case of mitral than aortic lesions, not giving harsh opinions, but talking sensibly to the patient, showing the dangers, prescribe a program of life, and if necessary, caution her against child-

bearing. If the cardiac troubles become dangerous to the life of the pregnant woman labor should be accelerated or brought about prematurely. In conclusion he speaks of the varicose veins of the pregnant condition.

5. **Gastroptosis and Gastrectasis.**—In these conditions Fogg thinks the two operations most rational and efficient are the Beyea operation in gastroptosis and gastroplication for gastrectasis. He reports a successful case of the former.

New York Medical Journal.

March 28.

8 Syphilitic Pseudotabes—Report of a Case; the Differential Diagnosis of Tabes. (To be concluded.) Joseph Collins.
9 *Streptococcus and Staphylococcus Bronchitis. Joseph M. Patton.
10 *Intestinal Resection and End-to-End Anastomosis, with the O'Hara Forceps, in a Case of Tubo-ovarian Abscess with Appendicitis; Recovery. George G. Ward, Jr.
11 *The Special Dispensary as a Factor in the Combat of Tuberculosis as a Disease of the Masses. S. A. Knopf.
12 *Opium in Surgery. Edward W. Lee.
13 *Retinoscopy. Daniel H. Wiesner.
14 *On the General Characteristics of Corneal Astigmatism. H. Davison Sarll.

9.—See abstract in THE JOURNAL, Feb. 14, p. 464.

10. **Intestinal Resection.**—Ward reports a case, calling attention to the advantages of the O'Hara forceps first described in the "American Journal of Obstetrics" for July, 1900. Their advantages are summed up by him as: 1. Only one forceps is required for any size of intestine; 2, it is not necessary to ligate or clamp the bowel as in the button or other methods, as the forceps keep the intestine closed at the site of resection throughout the operation; 3, no manipulation or work inside the bowel is done, so that the advantage of cleanliness is one of the strongest points in its favor. Lastly, the perfect control of the work, the slippery intestine being held with ease and allowing accuracy of suturing, and the general simplicity of the apparatus.

11. **Tuberculosis.**—Knopf is in favor of special provision for tuberculous patients in existing dispensaries, but still more for special tuberculosis dispensaries after the pattern of the Emile Roux foundation at Lille, France, and the one esablished in Havana by the United States government. He thinks there may yet come a time when with the modern sanatoria and some seaside sanatoria for tuberculous children, the tuberculosis dispensaries he advises will be valuable distributing and diagnosing points.

12. **Opium in Surgery.**—This article is a plea for opium in many conditions in surgery. Lee holds that while it should be used judiciously and its injudicious administration is injurious, it has special indications. In fractures, for example, and in severe burns, in trauma or surgical shock, if accompanied by pain or hemorrhage, and also before the administration of anesthetics. This is particularly true, he says, if the individual is addicted to the use of alcoholic stimulants or suffering from fever or nervousness. He notes the tendency to prejudice against it in abdominal surgery, but where it is possible to clean out the intestinal tract, relieve the lungs, kidneys, and liver of any co-existing congestion, he does not believe a little morphin to stop pain is going to do the harm credited to it. Of course, great caution should be used. It is the best internal hemostatic in the treatment of hemorrhage, and it often relieves obstinate and exhausting vomiting after anesthesia. In the first twenty-four hours after operation the pain becomes so severe it causes uncontrollable restlessness, and morphin should be used to relieve it. In certain conditions he believes in judicious administration of opium in peritonitis regardless of its cause. He gives examples of the reversal of the opinion in regard to opium when the surgeon is himself the operated on instead of the operator.

13. **Retinoscopy.**—Wiesner's article describes the conditions of the eye which may come before the practitioner, and endeavors to present a test for refractive conditions, calling attention to the abuses of refraction in the hands of unskilled and ignorant opticians.

14. **Corneal Astigmatism.**—Sarll describes the conditions of astigmatism, noticing some of the salient features, subjective symptoms, methods of diagnosis and correction.

Philadelphia Medical Journal.

March 28.

15 *The Increase of the Use of Cocain Among the Laity in Pittsburg. Thomas G. Simonton.
16 *The Use of the Electrothermic Angiotribe in Lieu of the Employment of Ligatures in the Open Operation for the Relief of Varicocele. Orville Horwitz.
17 Additional Notes on Organacidia Gastrica. Mark I. Knapp.
18 *Mouth Infection, Due to Natural Teeth. (To be continued.) D. D. Smith.
19 *Psychopathic Epidemics. (Continued.) John B. Huber.

15. **Cocain Addiction.**—The increase of cocain addiction is noticed by Simonton, who gives some of his own experiences, mentions symptoms and treatment. He finds that the drug produces an exhilarating effect which rapidly disappears, followed by increase audition and in habitues by auditory hallucination. He believes the habit is one of the most difficult of all drug habits to cure, and from his investigations in drug stores he finds that the sale is very largely increasing, especially among the colored population who are the largest users of it at the present time. It is his honest belief that 3,000 ounces is not an unusual amount to pass over a single counter in a year, but actual figures are hard to obtain. One druggist admitted, in the presence of witnesses, that he sold 40 to 50 ounces a month. He suggests a strict law against the sale of cocain, except on prescription of reliable physicians, who are personally known to the druggist, and prohibiting physicians from giving it to those who are thought to be drug fiends.

16. **Varicocele.**—Horwitz recommends the Downes' electrothermic angiotribe as described in THE JOURNAL for Aug. 17, 1901, for the open treatment of varicocele, reporting a case of unusually large varix, thus treated. He says it has decided advantages over the simple angiotribe in being less crude and dangerous, in less danger of secondary hemorrhage and thrombus, lack of pain after operation and less danger of orchitis.

18.—This article has appeared elsewhere. See THE JOURNAL of March 14, ¶83, p. 739.

19. **Psychopathic Epidemics.**—Huber notices in this article the Schlatter, Francis Truth, osteopathy, Eddyism and other delusions. He considers that Schlatter was probably honest, but insane. He remarks as to the factors which produce these psychopathic epidemics, that imitation is far the most potent. He has investigated Eddyite cures and has not come across a single one of a serious disease, which they claimed to have thus relieved.

Medical News, New York.

March 28.

20 *Spinal Concussion, So-called. Carl E. Black.
21 A Brief Consideration of the Mechanism of Mental States Encountered in Alcoholic Insanity, with Illustrative Cases. W. K. Walker.
22 *Scope of Vaginal Section. H. J. Boldt.
23 *The Scope of Vaginal Section. Hiram N. Vineberg.
24 *How Easily We Can be Mistaken in the Diagnosis of Cancer of the Stomach. Mark I. Knapp.
25 *The Operative Treatment of Fracture of the Patella. Russell S. Fowler.
26 Some Physiological Observations on a Crustacean Heart. George V. N. Dearborn.

20.—See abstract in THE JOURNAL, xxxix, p. 1,132.

22. **Vaginal Section.**—Boldt's article is the same in substance as that abstracted in THE JOURNAL of March 28, ¶84, p. 875.

23. **Vaginal Section.**—Vineberg considers this subject exclusive of vaginal hysterectomy and also of operations performed for the correction of uterine displacements by this route. Excluding these, he finds the scope of the operation in pelvic abscess, pyloroplasty and ovarian abscess, conservative surgery in diseased adnexa, in cases of ovarian cyst, in myomectomy for small fibroid growths of the anterior wall or the fundus of the uterus, in ectopic pregnancy under certain conditions, as: 1. In obscure cases to aid in forming the diagnosis, and 2, in cases where there is no further hemorrhage and the already effused blood has formed a hematocele in the Douglas cul-de-sac or at the base of one of the broad ligaments. In many of these cases vaginal section and drainage prove to be curative. In others, again, the affected tube is the source of future trouble which may require its removal with the corresponding ovary. In case of pyosalpinx and ovarian abscess he would operate by this

method only when the sac is easily reached and can be removed entire, and when it is not large and can be removed readily by the anterior incision, and sometimes in the acute stage to tide the patient over the dangerous period. The locality of the pus collections, in abscess and salpingitis, of course, must guide the operator.

24. **Cancer of the Stomach.**—Knapp gives a hypothetical and two actual cases, one of his own observation and one taken from Obrastzow's experience, which show the difficulties sometimes encountered in recognizing the true condition of things in certain cases of gastrosia fungosa.

25. **Fracture of the Patella.**—Fowler considers a certain number of cases in which operative treatment is contra-indicated such as when there is intercurrent disease of such a nature as to prohibit operation, and when the patient prefers to pass the remainder of his life partially disabled rather than to take the chances of a certain amount of risk of life. Longitudinal fractures do not require operation. In comminuted fractures it is unjustifiable except in selected cases when circumsuture may be employed; neither do transverse fractures in which rupture of the capsule has not occurred, require operation. This alone, however, is very rare and is revealed by slight separation of the fragments, absence of tilting of the fragments, and but slight effusion in the joint. The aponeurotic structures on either side of the joint will also be found intact. In ordinary transverse fractures, bony union is prevented by separation due to muscle contraction and the interposition of periosteum and torn capsule between the fragments, and also by tilting of the fragments, all three of which are hindrances to proper approximation, and one of which, the interposition of periosteum and torn capsule, forms an unsurmountable obstacle to bony union. The pathologic conditions, therefore, are absolutely in favor of operation. Treatment by apparatus is, moreover, unsatisfactory. There is a constant tendency to stretching of the fibrous structures causing weakness in the extension of the limb and inability to walk except on the level. Adhesions are apt to persist and cause pain, hence, the advisability of operative interference in all these cases. The amount of coincident traumatism and synovitis must determine the time of operation. If there is slight injury to the surrounding structures it may be immediate. If, however, the traumatism and synovitis are marked, it is best to allow a few days to elapse so as to give the system a chance to meet more effectively the additional traumatism of operation. This period varies from five to fourteen days. Over-separation of the fragments should be guarded against and effusion controlled by elevation, fixation, evaporating lotions, ice pack, etc. In case of extreme distension of the joint, aspiration may be performed aseptically. In his operations he makes it the rule not to allow the hand to touch the wound, using two knives, one for the skin and one for the deeper tissues, to protect against infection. The details of operation are given. The surfaces are freshened with a sharp curette, all the blood clots removed, the bone is drilled, the drill provided with an eye forming a carrier for the suture. He uses a medium-sized chromicized kangaroo tendon for suture. A light dressing is applied and the ends secured by the Volkman splint. In the later treatment he sometimes uses a light plaster cast if necessary. Cases are reported.

Boston Medical and Surgical Journal.

March 26.

27 *Extensive Cavity Formation in the Central Nervous System, Presumably Due to Bacillus Aerogenes Capsulatus. Emma W. Mooers.
28 *Bacillus Shiga in an Epidemic of Diarrhea. Lawrence W. Strong.
29 *Systemic Infection Due to Natural Teeth Conditions. D. D. Smith.
30 *Suppuration of the Frontal, Ethmoid and Sphenoid Sinuses. (Concluded.) Edgar M. Holmes.

27. **Cavity Formation in the Central Nervous System.**—Mooers describes a case of very extensive "Gruyère cheese" brain and cord, of which the illustrations are very striking. The patient was an old paretic, profoundly demented. He died suddenly with signs of increased restlessness, abdominal distension, a temperature of 104 and respiration of 48 to 58. The autopsy showed the condition as mentioned and revealed in the cavities great numbers of bacilli about the size and appearance of anthrax bacilli, and morphologically and in staining reaction identical with the *Bacillus aerogenes capsulatus* of Welch. To these she attributes the cause of the condition and thinks it is probable that it existed before death as there was no other demonstrated cause and the invasion of the circulating blood by the bacilli might be assumed to account for the symptoms.

28. **Bacillus Shiga in the Epidemic of Diarrhea.**—Strong reports an epidemic of diarrhea, with many cases of ileocolitis in a seaside summer resort where sanitary conditions were almost ideal. The water supply seemed to be well isolated, there was nothing to credit it with the disorder. The milk supply was also apparently as good as could be expected. The bacillus isolated seemed to be identical with that of the *Bacillus dysenteriæ* of Shiga and its reaction in cultures was identical. The strongest suspicion as to cause of the disorder seems to have been from milk infection.

29.—This article has appeared elsewhere. See THE JOURNAL of March 14, ¶83, p. 739.

30. **Sinus Suppuration.**—Holmes' article is concluded in this issue. He notices the symptoms of nasal sinusitis at length, whether located in the anterior, ethmoid or sphenoid cells. Prognosis and treatment are also detailed. He thinks the prognosis is generally fair, though considerable care and attention should be given to the after-treatment, and some relics of the disorder may remain. The article with the preceding issues should be thoroughly read for its full understanding.

Medical Record, New York.

March 28.

31 *Renal Decapsulation for Chronic Bright's Disease. George M. Edebohls.
32 *Specific Treatment of Diphtheria. George B. Philhower.
33 *The Psychical Element in Hay Fever. Raymond Wallace.
34 On the Biological Relationship of Proteids and on Proteid Assimilation. P. A. Levene.

31. **Renal Decapsulation.**—Edebohls reports his experience with his method of renal decapsulation for chronic Bright's disease, including a total of 51 cases. A number of these are reported in detail. There were 14 deaths; 7 of them within fifteen days of operation and 7 at later periods. Three of the 7 deaths of the operative mortality were due to uremia, 2 to acute dilatation of the heart, 1 was caused by pneumonia and one by combined uremia and cerebral hemiplegia. He was obliged to take cases almost moribund. He does not consider the mortality a serious one, in fact, the greatest peril to the patient is from the anesthetic. Of the remaining patients, 2 patients did not show satisfactory improvement; 22 are in various stages of satisfactory improvement and progress toward health at periods varying between two and fifteen months after operation. They have not, however, passed the probationary period of six months of normal urine, before the expiration of which no patient is entitled to a place on the list of cures. Nine patients were cured and remained cured in periods varying from one year, nine months to ten years. One patient operated on with one kidney had a repetition of chronic Bright's disease after four years. He thinks there are two important facts to be recognized, first, that chronic Bright's disease in its early stages, at least before serious and fatal damage has been done, is curable or susceptible to amelioration by renal decapsulation. The second is that renal decapsulation in the early stages of chronic Bright's disease is attended in competent hands with little or no risk of life.

32. **Diphtheria.**—Philhower advocates the use of antitoxin in all cases of diphtheria and would have it required by law. Since 1895 antitoxin has saved for him 28 children and given him just about one year's more sleep than he would otherwise have enjoyed without its use. He prefers to use in tonsillar cases 2,000 units, 10 c.c. in quantity. Nasal cases require two to three times as much and the laryngeal cases should receive from three to five times as much. If there is a great amount of glandular swelling, very large doses of 4 to 6,000 units should be used as the swelling indicates extensive poisoning. He prefers 2,000 units strength, in 10 c.c. and would stick to one reliable manufacturer.

33. **Hay Fever.**—The psychical element in this affection is noted by Wallace, who reports several cases where, he thinks, it was an important element. There is hardly another disease in which it is so important as in this.

Cincinnati Lancet-Clinic.
March 28.

35 *The Removal of the Appendix as an Incident in Abdominal Operations. J. F. Baldwin.
36 Enuresis. F. H. Darby.
37 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.
38 A Combined Serum, Obtained from the Jackass and the Billy-goat. Brose S. Horne.

35. **Removal of the Appendix in Abdominal Operations.**—Baldwin has examined his cases for some time to see the condition of the appendix, and in a total of 636 he found it normal in only 27 cases. This, he thinks, is an overestimate, as external examination does not give a good idea of the internal conditions. He advises removal in all cases, and in nearly all of these the appendix was removed by his method of inversion, consisting in first ligating the meso-appendix close to the bowel, then cutting it across beyond the ligation and stripping it away from the appendix clear to the tip with the fingers or forceps. Then inverting the appendix commencing at the tip, and when concluded, a single stitch of catgut is taken across the inverted base and the operation is finished. The inverted appendix, he says, drops off in a few days and is evacuated. This takes one or two minutes of time, and he would not advise it in cases where great expedition is required on account of an alarming condition of the patient.

St. Louis Medical Review.
March 28.

39 Clinical Report of Cases (Appendectomy, Hemiglossitis, Abdominal Hysterectomy). R. M. Funkhouser.
40 Acute Articular Rheumatism, with Serious Complications. Edmond J. Melville.

University of Pennsylvania Medical Bulletin, Philadelphia.
March.

41 A Report of Two Cases of Trephining for Jacksonian Epilepsy. Charles K. Mills and J. William White.
42 *Dementia Precox (Dementia of Adolescence). Charles W. Burr.
43 *A Physiological, Anatomical and Pathological Study of the Glossopharyngeus and Vagus Nerves in a Case of Fracture of the Base of the Skull. William G. Spiller.
44 The Effects on the Nervous System of Electric Currents of High Potential, Considered Clinically and Medicolegally. Charles K. Mills and Theodore H. Weisenburg.
45 A Case of Intradural Spinal Cyst, with Operation and Recovery. W. G. Spiller, J. H. Musser and Edward Martin.
46 A Case of Progressive Muscular Atrophy Occurring in a Man Who Had Had Acute Poliomyelitis Nineteen Years Previously. Charles S. Potts.
47 *The Skiagraph in Gross Brain Lesions. Henry K. Pancoast.
48 The Changes in the Peripheral Nerves Produced by Toxic Substances Applied to the Skin—A Medicolegal Study. D. J. McCarthy.
49 The Use of Respiratory Exercises in the Treatment of Neurasthenia and Allied Conditions. J. W. McConnell.
50 Traumatic Musculospiral Paralysis, Cured by Operation Releasing the Nerve from the Cicatricial Tissue. Charles J. Mills. Operation by J. William White.

42. **Dementia Precox.**—Burr reviews the history of this form of mental disease remarking that hardly any of its symptoms are characteristic in its early stages, and that it is especially a disorder of bad organization. No one will get dementia precox except those who are preordained. He reports several cases to give the clinical picture of the disease and remarks that while the onset was said to be sudden, this is due to lack of careful observation in the preceding stages. Apart from heredity it is probable that a fetal disturbance may be largely its cause. The age of onset with marked symptoms varies within large limits. He includes here, rather provisionally, the original paranoia, reporting one case of this type The symptoms are nearly all mental. There may be emaciation, poor circulation, dermographia, etc., in the early stages, but there are never evidences of organic brain or spinal disease. There are no pathognomonic symptoms. The patient generally keeps his consciousness in the early stages of the disease, but can not control his hallucination or delirium. In stuporous cases unconsciousness may be apparent, not real, and during that stage there may be the increased muscle tension known as catatonia. Remissions are common. The prognosis is bad. The paranoid form is never recovered from. A few, 8 or 10 per cent., of the hebephrenics and a slightly larger number of the catatonics recover. Many go on to absolute dementia and some become quiet, chronic patients of the asylum. The treatment is not very hopeful in the well-pronounced disease, but careful attention to early training and environment may have very good results.

43. **Glossopharyngeus and Vagus Affections.**—Spiller reports a case in which there was an extensive softening involving the roots of the glossopharyngeus and vagus, and he remarks in regard to the functions of these nerves as indicated by the symptoms during life, especially the taste sensations. They were intact in the anterior portion of the tongue, hence, he concludes that they must pass through the chorda tympani, but whether through the portio intermedia or the trigeminus he is not prepared to say. As for the posterior portion of the tongue he is inclined to think that the glossopharyngeal nerve controls the function of that region. He also discusses the mode of innervation of the soft palate and the origin of the accessorius as illustrated by this case.

47. **The Skiagraph in Brain Lesions.**—From a number of cases here reported, McCarthy concludes that the value of the Roentgen rays in brain lesions is at present dubious, but it may yet be an important point in the diagnosis. To gain such experience no case should be allowed to escape the skiagrapher.

Journal of Cutaneous Diseases, New York.
March.

51 *The Etiology of Acne Vulgaris. T. Caspar Gilchrist.
52 Report of a Case of Systemic Blastomycosis, with Multiple Cutaneous and Subcutaneous Lesions. Oliver S. Ormsby.
53 Acne and Its Treatment. George H. Fox.

51. **Acne.**—Gilchrist has studied the etiology of acne vulgaris, including in this paper the results of his previous observations, and finds that a definite bacillus, which he had already named the *Bacillus acnes*, was present in all smears taken from 240 typical acne lesions in 85 patients. Pure cultures were obtained from 62 lesions in 29 patients. The others were failures largely because the proper media were not used. Others showed the *Staphylococcus pyogenes albus* or *epidermidis albus*. Sections of an excised comedo, of an early acne papule, of an acne pustule and of five acne nodules from 6 patients demonstrated the stages of the disease, consisting in changes extending deep into the corium surrounding in some nodules a magnified and markedly hypertrophied follicle. The lesion was made out of cell masses, many giant cells, plasma cells or connective tissue cells and many polymorphonuclear cells were present, massed in some sections so as to form miliary abscesses; numerous phagocytes and many pigment cells were also seen in some cases. The blood vessels were numerous and dilated. Some of the giant cells contained bacilli. *Bacillus acnes* was found pathogenic in mice and guinea-pigs. It is a short, thick bacillus in the smears, but in culture it often becomes much longer and thicker; and in old cultures assumes distinct branching forms. The clumping of *Bacillus acnes* by the sera of the patients affected with acne vulgaris suggests a specific toxic body derived from the presence of the bacilli and absorbed by the blood, resulting in a specific agglutination. Gilchrist thinks it is a question whether we are not taking a wrong view in considering the anemia, constipation, headache, coated tongue, etc., as always predisposing causes of acne vulgaris, whereas these may be the result of the absorption of toxins from the bacilli. He compares the disease with erysipelas. While there are predisposing causes such as age, diet, etc., there are many cases where all that is advised is carried out without results. In its severer forms acne vulgaris is a serious disease, not dangerous, but one that affects the whole system. He notices in conclusion Sabouraud's recent article and discovery of a microbacillus, which, he thinks, looks like his findings, but he remarks that it is curious that Sabouraud has observed no branching forms.

Interstate Medical Journal, St. Louis.
March.

54 *Remarks on the Significance of Some Nervous Signs and Symptoms. Charles G. Chaddock.
55 *Tobacco Poisoning. A. C. H. Friedmann.
56 Laboratory Diagnosis—Its Relation to the General Practitioner. Raymond Wallace.
57 Appendicitis. H. L. Nietert.

54. Significance of **Nervous Reflexes.**—From his observations, and he criticises the text-books, Chaddock deduces that alterations, that is, exaggeration or diminution of the deep reflexes are almost always indicative of organic nervous disease; that the Babinski sign (the physiologic presence in infancy excepted) and foot-clonus are always signs of organic nervous disease, and lastly, anomalies of pupillary reaction to light have the same significance. There is only one exception to these deductions: disease of a joint may cause atrophy of muscles about it and with this, exaggeration of related deep reflexes. He doubts the pathologic exaggeration or diminution of deep reflexes during fatigue.

55. **Tobacco Poisoning.**—Friedmann thinks that the smoking of tobacco is especially injurious if excessive, as also is tobacco chewing, which may give rise to tobacco psychoses. Snuff-taking does not affect the general health, but may injure the middle-ear and set up a distinct form of chronic otitis media. The relation of alcohol to tobacco as a cause of amblyopia is discussed, but he thinks the effects of alcohol on the eyes are decidedly different, and as a rule not half as serious. The great danger of this is in the general poisoning of the nervous system and there is no such demoralizing effect after tobacco use. The danger, of course, lies in the fact that both are usually practiced by the same individual and he has to combat them both together.

Journal of Medical Research, Boston.

March.

58 *Observations on the Morphology of Bacillus Diphtheriæ, Bacillus Pseudo-Diphtheriæ and Bacillus Xerosis. Francis P. Denny.
59 A New Technic in Metabolism Experiments. Francis H. McCrudden.
60 An Encapsulated Diplococcus in Mastoiditis. Mary S. Packard.
61 A Study of the Necroses Occurring in the Livers of Experimental Animals After Inoculation with Hog-Cholera Bacilli. Charles H. Boxmeyer.
62 On the Multiplicity of the Serum Hemagglutinins of Cold-blooded Animals. Hideyo Noguchi.
63 On the Heat Lability of the Complements of Cold-blooded Animals. Hideyo Noguchi.
64 The Period of Development, the Time of Greatest Accumulation, and the Persistence of Diphtheria Antitoxin in the Blood of a Series of 100 Horses. James P. Atkinson.
65 *The Presence of the Shiga Variety of Dysentery Bacilli in an Extensive Epidemic of Dysentery, with Notes upon the Serum Reactions Obtained. Wm. H. Park and H. W. Carey.

58. **The Morphology of Bacillus Diphtheriae.**—Denny has investigated this bacillus and its allied forms, and finds that the three forms, the *Bacillus diphtheriæ*, the *Bacillus pseudo-diphtheriæ* and the *Bacillus xerosis* are similar in young cultures. In older cultures differences are seen. The *Bacillus diphtheriæ* has a more marked development as a higher form, showing clubbed, barred and filamentous forms, and occasionally true branching. The *Bacillus pseudo-diphtheriæ* has no such development, but the *Bacillus xerosis* has a higher development, characterized by the elongation of the rods and the breaking up of the protoplasm into segments. He suggests that the diphtheria bacillus and that of xerosis have developed by evolution from simple forms like *Bacillus pseudo-diphtheriæ*, each passing through, in its early life, a stage of development corresponding to the early development of the race, or it is possible that the *Bacillus pseudo-diphtheriæ* represents a reversion from a higher type.

65. **Dysentery Bacilli.**—Park and Carey describe an epidemic of dysentery occurring in a town of about 3,000 population, a little north of New York City. There were about 350 cases with a mortality of 6 per cent., the average age of fatal cases being a little less than three years. The epidemic was most severe among the class of people living in filthy surroundings. There was no sewage system and the well water was badly contaminated. The onset in all cases was sudden, with cramps, diarrhea and tenesmus. The stools were at first feculent, then sero-mucous, then finally bloody and mucous. Blood was present in considerable quantity for two or three days and then disappeared. It disappeared entirely in most cases in six to ten days. Temperatures were low. The mild cases lasted generally two weeks, the severe three to four, the malignant a few days. In one fatal case of a child aged one year and four months, an autopsy was obtained and the Shiga bacillus isolated. Dysentery-like bacilli were also found in the feces of several convalescents. The difference was in the indol formation and the manit fermentation, also in their agglutination reaction. The authors hold that there may be more than one form of bacillus responsible for dysentery epidemics. It is extremely probable that if Shiga carries out his culture and agglutination tests as far as is now known to be necessary in order to differentiate the varieties, it will be found that in Japan, as well as in America and elsewhere, not one, but several varieties of this group of bacilli are present.

Annals of Ophthalmology, St. Louis.

January.

66 Report of Two Cases of Congenital Anomalies of the Eyes, Illustrating the Transmission of Such Defects from Mother to Daughter. Wm. Campbell Posey.
67 *The Conservation of Binocular Single Vision. Eugene R. Lewis.
68 *Paraffin—Its Use in the Formation of a Stump After an Enucleation. George F. Suker.
69 *An Examination, Personally Conducted, of 4,608 Railroad Employes for Acuity of Vision, Hearing and Color Perception. Gilbert D. Murray.

67. **Lack of Binocular Single Vision.**—This condition is much more common than is usually supposed, according to Lewis' observations. He summarizes his conclusions on the subject in the following: "1. The only congenital attribute of vision is proper light perception. All other visual attributes depend on learning on the part of the child. 2. In many cases certain influences cause this learning to be directed into other than normal paths, in which event the act of binocular single vision is not learned. 3. Lack of binocular single vision is a very prevalent condition. 4. This lack represents great loss to the individual. 5. Cases in which the causal influences can be removed may be differentiated from those in which such removal is impossible. 6. Proper measures adopted at the right time will result in conservation of binocular single vision in a large number of cases."

68. **Paraffin for Eye Stumps After Enucleation.**—Paraffin prothesis for making a stump is recommended by Suker, who uses a mixture of white paraffin and pure vaselin, 3/5 of the latter and 2/5 of the former. This gives a mixture which melts at 102 F. Later the vaselin is absorbed, leaving the hard paraffin, with a higher melting point. This has been proven in cases of furnace workers. The melting point of paraffin can be regulated by the amount of vaselin added; the more vaselin the lower the melting point, and vice versa. He would preferably inject the paraffin about one week after evisceration. It is still more useful for restoration of a sunken socket after a remote enucleation. The details of the procedure are given:

> After thoroughly cocainizing the socket, as well as having freely used adrenalin (1/1000), with a pair of tissue forceps you pick up the apex of the socket-pit; then with a narrow scalpel you enter the subconjunctival space at the apex to the extent of 3 millimeters, then make an elliptical cut about the point of entrance. This will give you a pocket in both culs-de-sac, with but a single opening. The entire anterior flap of this pocket will be approximately 3 mm. thick, and the size of the pocket will be in accordance with the size of the socket to be filled out. The higher you cut into the cul-de-sac, the more prominent will the stump be after the injection of the paraffin. After checking the trivial hemorrhage, you inject about a dram or so of properly prepared paraffin through this small opening, or enough to give you the desired fulness. However, be careful not to overdistend the cavity as this will produce not only great pain but even sloughing of the flap with the ultimate expulsion of the paraffin. Before introducing the paraffin it is advisable to place a suture so as to be able to close the opening after the injection, it being rather difficult to do it afterward.

The reaction is usually quite severe, but can be controlled by a cold pack for several hours and repeated as needed. The artificial shell can generally be inserted in one week to ten days later.

69. **Railroad Employes' Examinations.**—Murray reports the results of examination of something over 4,000 men for the Delaware, Lackawanna & Western Railroad for vision, hearing and color perception. He found about 3.01 per cent. were color blind; 2.58 per cent. had weak chromatic sense; 9.44 per cent. were in need of glasses or other means to improve their vision for distance. He suggests discouraging the use of tobacco and making frequent examinations on account of the dangers of acquired color blindness; that the employes should have at least eight hours of sleep, as loss of sleep leads to intemperance, smoking and nervous irritability.

American Journal of Obstetrics, New York.

March.

70 *Report of Three Cases of Rupture of the Uterus During Labor and a Consideration of the Treatment Based on Ten Cases. Joseph B. De Lee.
71 The Treatment of Placenta Previa. Chauncey D. Palmer.
72 *The Relation between Uterine and Gastric Diseases. Tuszkai Odön.
73 *Puerperal Eclampsia, with Report of Nineteen Cases. H. G. Partridge.
74 Carcinoma of the Large Intestines, with Special Reference to von Mikulicz's Method of Resection. M. Stamm.
75 A Review of Some of the Older Writings on Maternal Nursing. Samuel McC. Hamill.
76 *Celiotomy During Pregnancy. J. H. Carstens.

70. **Rupture of the Uterus.**—De Lee reports a case and reviews the treatment. He remarks that it is not always possible or advisable to attempt to deliver a child by the natural route on account of the danger of hemorrhage. In case of uncontrollable hemorrhage or highly contracted pelvis, laparotomy may be imperative. What to do with the uterus depends on the conditions. In hospitals and under aseptic treatment the uterus may be closed with a suture or drained from below, but if there is any suspicion of sepsis, the whole uterus should be removed, the peritoneum closed and the subperitoneal space drained per vaginam. It is an accident which usually occurs at home and has to be treated where it occurs. The conditions do not permit of transportation, as a rule, and since laparotomy is a formidable operation requiring much preparation, the method of treatment that brings about the quickest delivery, stops hemorrhage and gets the patient into bed is the correct one. Of the four methods of treatment, delivering the patient from below, that is, expectancy and symptomatic treatment, tamponade, with or without suture, or extirpation of the uterus per vaginam, the best one is the partial suture and drainage of the peritoneal cavity and site of rupture. In septic cases drainage offers much hope, but vaginal extirpation of the uterus is coming into vogue and when hemorrhage is not too severe it may be practiced.

72. **Uterine and Gastric Diseases.**—The relation of uterine and gastric diseases are summarized by Oedö as follows:

1. Uterine and gastric troubles may be in close reciprocal relation. 2. In making a diagnosis of reciprocal action, merely coincident affections of these organs must be strictly excluded. 3. The first medium of reciprocal action is the nerve path, the center of which for the genital is to be sought, not in the brain or spinal cord, but in the sympathetic system. The ventral center of this is the solar ganglion, by means of which the uterus, through the inferior hypogastric plexus, is brought into reflex association with the anterior and posterior gastric plexuses. The reflex paths are called spermatic, pudendo-hemorrhoidal, cutaneo-cavernous, utero-celiac, and utero-spinal anastomoses. The more direct reflex paths are direct connections of the vagus with the sympathetic nerve system without entering the solar plexus, especially with the utero-vaginal plexus and with the parauterine ganglia, which are connected with this (genito-orural anastomosis). 4. The other mode of origin of reciprocal action must be sought in changes of the common statical relations of both organs. 5. Dislocations of the stomach cause uterine displacement through reciprocal action of the statical mechanical forces (secondary uterine trouble); whereas primary displacements of the uterus produce secondary gastroneurosis or actual gastric disease, the reciprocal action in these cases being brought about through nerve reflexes. 6. The blood path plays a rôle of only tertiary rank in regard to this reciprocal action.

73. **Puerperal Eclampsia.**—The theories of eclampsia are noticed by Partridge, who considers the albuminuric theory insufficient. The thyroid theory may be correct in some cases, but the most generally accepted one, and the one that best explains the condition, is the toxemic or metabolic theory, and he is inclined to follow Dorland's suggestion that acetone may be responsible, though other toxic agents also have an action, and there is a promising field of research here. He considers that in treatment, chloroform, while it controls the attacks, is only treating a symptom. Morphia dries up the secretions, though this objection is often more theoretical than practical. Venesection and veratrum viride are mentioned as of use in certain cases, and pilocarpin is occasionally of much value, though it is liable to produce edema of the lungs, a danger to which the patient is already only too subject. Chloral and the bromids are the sheet anchors as far as controlling convulsions are concerned. They should be preferably given by the rectum. Diuretics and cathartics should be given in every case until both the kidneys and the bowels are thoroughly active. For bowel action croton oil or saline cathartics are preferable. Hot baths, hot packs or hot air are of value, and one or the other should be used in every case to produce sweating. When the temperature is rising, a cold tub bath may do good, as in one case reported. The use of normal saline solution is becoming more and more popular, and deservedly so. The last and most important method of all is emptying the uterus. The method of procedure must vary with the case, using the dilator if necessary. Undue force and too great haste must be avoided, however.

76. See abstract in THE JOURNAL, xxxix, p. 854.

Therapeutic Gazette, Detroit.

March 15.

77 The Treatment of Typhoid Fever with Benzoyl-Acetyl-Peroxid or Acetozone—A Clinical Study of Its Action in 128 Cases in the Cook County Hospital. Frederick G. Harris.
78 *The Effects of the Inhalation of Smoke and of Irritating and Poisonous Gases by Firemen, and the Proper Treatment of Results. J. Chalmers Da Costa.
79 Treatment of Prostatic Hypertrophy. (Continued.) Edward Martin.
80 *A Critical Study of Tuberculin and Allied Products Based upon a Collective Investigation. F. M. Pottenger.
81 Observations upon the Hypnotic Action of Hedonal. Frederick L. Hills.
82 *An Inquiry into the Value of the Irrigation Method as a Means of Aborting and Treating Acute Specific Urethritis. Orville Horwitz.

78. **Smoke Inhalation.**—The danger of inhaling smoke, according to Da Costa, is very serious. There is a great difference among men in their tolerance of it, alcoholic cases and fat people with heart disease can not stand much. There is a great difference also in the various kinds of smoke. In all cases it contains some carbon monoxid. Some smoke is merely irrespirable, some is not only irrespirable, but poisonous and irritating. Cold smoke is much less troublesome than hot smoke. Among the worst forms of plain smoke may be mentioned smoke from lumber, furniture, barrel-staves, peach baskets and paper, which is suffocating and irritating to the eyes and respiratory organs. Smoke from oil, varnish or paint is hard to tolerate, while that of rags, hay, pitch and petroleum is not so offensive or so irritating. The density must be taken into account. Comparatively innocent smoke if very dense will be equally bad. The theory that smoke is only irrespirable when a lamp will not burn in it is not correct, as a lamp will burn in smoke that a man can not breathe. Smoke containing ammonia or sulphuric acid is especially bad. Illuminating gas is very dangerous, especially water gas which is at present so much used and can not be detected by its odor. Smoke containing acid fumes is very bad, as shown by the recent experience at Milwaukee where the chief of the fire department and three of his men died from the inhalation of nitric acid fumes. A man generally knows when he is going to be overcome, by the tendency to breathe with his mouth open, to take deeper and more frequent breaths, and by the development of singing in the ears, oppression in the chest, etc. He often falls when he gets out into the fresh air, but ordinarily recovers, though he is more likely to be overcome the second time. In very severe cases consciousness may be lost, the extremities become cold, muscles relaxed and delirium may follow the unconsciousness. The milder cases recover in the open air. In the actual cases of unconsciousness there is danger. Firemen believe in yeast beer as a remedy which causes a gaseous distension of the stomach, with belching and sometimes vomiting. Dr. Da Costa is not able to show how this benefits, but they have great faith in it. In treatment, artificial respiration, the administration of oxygen, rubbing the extremities and later hot applications and further symptomatic treatment. The surgeon should always ask whether the smoke is clean smoke or not, in treating these cases. The victims of "back drafts" are usually scorched and shocked. Men who inhale hot smoke should be given stimulants at once and removed to a hospital. The coal gas effects are especially bad, and a man will generally have warning of it in headache and great muscle weakness before he is overcome. In these cases when a man is overcome with illuminating gas, artificial respiration should be practiced and continued until satisfactory results have been obtained; rubbing the extremities, a mustard plaster over the heart, hypodermic injections of strychnin or atropin and as soon as safe to move the patient, he should be taken to a hospital. In cases of inhaled ammonia the inhalation of vinegar is advisable, and very

dilute ammonia may be given after the inhalation of acid vapors. Vomiting should be encouraged. If chlorin or hydrochloric acid has been inhaled, the best treatment is the inhalation of steam. If these have been inhaled to any great extent, the man's life is in danger from glottic edema and an immediate tracheotomy may be required.

80. **Tuberculin.**—The literature is first noticed by Pottenger, who deduces, in substance, the following conclusions from the answers received in his investigation: 1. The profession, especially in Europe, is becoming less hostile to tuberculin and its allied products. The greatest opposition is from those who were unfortunate in their first experience. All who have used it later in suitable cases have observed a benefit, and those who have studied the remedies most carefully and used the greatest care and judgment in the selection of cases, have found almost without exception that they are of value. In 1,200 first stage cases, 610 treated in sanatoria by the usual hygienic methods and 589 under the same careful management plus tuberculin, 20.2 per cent. more of the latter were cured than of the former. Tuberculin checks the tendency of the disease to spread to new tissue, and there is less danger of relapse. He therefore concludes that tuberculin and the allied products are therapeutic measures in tuberculosis that are worth our earnest attention.

82.—This article has appeared elsewhere. See THE JOURNAL of March 28, ¶67, p. 874.

Kansas City Medical Index-Lancet.

March.

83 Report of a Case of Intestinal Anastomosis Following Strangulated Inguinal Hernia. C. Lester Hall.
84 Acute Appendicitis and Its Treatment. (To be continued.) John B. Deaver.
85 *Some Clinical and Operative Phases of Appendicitis. A. H. Cordier.
86 *Apomorphia and Some of Its Uses. W. H. Middleton.

85. **Appendicitis.**—Cordier advocates operation in nearly all cases. The clinical history is often misleading. The temperature is not so very important as an operation indicator as has been held. The pulse is, as a rule, increased, and can be relied on more in prognosis than can the temperature. This is especially true in the later stages of general peritonitis, but as long as the trouble is confined to the appendix proper, or its immediate vicinity, its behavior is often misleading. There may be a pulse of 140 from ptomaine absorption without any peritonitis at all, and this is often lost sight of by the practitioner. The rapidly constitutional septic cases are the most fatal of all. Pain is always present at some stage, yet its character and intensity is as variable as any other symptom. To rely on it would often be disastrous. He thinks the McBurney point is the most unfortunate discovery ever made. The appendix points according to its location, length and to the location of the pathology of the organ, and dependence on this point will lead to error. The most trustworthy indication of the true condition is, he thinks, tenderness located at the point nearest the site of that portion of the appendix diseased. Intestinal gaseous distension as a symptom of danger is valuable, but its absence is often misleading. The main point in his paper is to lay stress on the fact that to expect to find typical smyptoms and be governed by their presence or absence, is a mistake and will cause delays and fatal errors. The presence or absence of leucocytosis is also too uncertain and misleading to be taken seriously.

86. **Apomorphia.**—The value of apomorphia in various conditions is insisted on by Middleton, who finds it one of the best emetics, acting directly on the vomiting center and producing but little nausea and usually no depression. He has seen it act in one or two minutes. While it is generally considered harmless, idiosyncrasy should be regarded. Death has occurred from the hypodermic injection of 1/15 of a grain. When necessary to evacuate the stomach no remedy acts so well. It has no irritating effect on the mucosa. Some authors say that the emetic action of apomorphia is hindered by chloroform or chloral and intensified by morphin. If this is so, it would seem that the drug is especially adapted to cases of morphin narcosis. Nothing arrests the hysterical paroxysms so quickly. He often gives it for various purposes in non-emetic doses, and in combination with codein and white pine mixture it forms an ideal cough mixture, and it has no rival in post-grippal cough. As an expectorant, it takes a prominent position and in croup it has given him splendid results.

Vermont Medical Monthly, Burlington.

February 25.

87 Puerperal Septicemia. M. F. McGuire.
88 *Family History in Tuberculosis. A. B. Bisbee.
89 Acute Confusional Insanity. G. G. Marshall.
90 A New Method of Treatment for Chronic Anterior Urethritis and for the Declining Stage of Acute Urethritis. William W. Townsend.

88. **Family History in Tuberculosis.**—The modern tendency to attribute everything to germs and neglect heredity is opposed by Bisbee in the case of tuberculosis. He thinks importance should be laid on a number of conditions, especially by life insurance examiners. Contagion is only one; age, occupation, habits, personal history, weight and especially the family history are insisted on. The points, he says, on which we should lay strong emphasis are that there is nothing in the modern doctrine of tuberculosis or any recorded experience of life insurance companies justifying the conclusion that a consumptive family history can be neglected; that, while the death of a parent, or brother, or sister from consumption increases the liability to disease, it is possible to get a proper understanding of the degree of impairment only by giving attention to the applicant himself, his environments and his personal health record, as well as his family history. There should be no fixed rules. An active outdoor life, temperate habits and a robust physique may be looked on as compensating features when there is an inherited tubercular tendency, while the opposite conditions affect the risk adversely.

American Practitioner and News, Louisville, Ky.

January 1.

91 Otitis Media. Hugh N. Leavell.
92 Report of Cases of Gallstones. William Moore.
93 Inevitable Abortion, with Report of Case. W. E. Gardner.

Nashville Journal of Medicine and Surgery.

March.

94 Gastric Carcinoma. David R. Neil.

Pediatrics, New York.

March.

95 *Observations on the Micro-organisms in the Water of Public Swimming Baths, and a Suggestion. E. E. Glynn.

95. **Micro-organisms in Public Baths.**—Glynn has investigated the water of various Liverpool swimming baths at different periods of the day and finds a vast increase in the number of bacteria towards the close of the day. He describes his methods, which seem to be satisfactory; taking an average of five observations on separate days of first class baths, it was found that the number of bacteria per c.c. in the water at night was 4,676; deducting 200 for those already present in the bath and 400 for multiplication, we find that 292 bathers introduced in round numbers 4,000 bacteria per c.c. Therefore, each individual introduced 13.7 bacteria per c.c. The water removed from the skin and hair of each bather in about ten minutes, approximately gave 4,000,000 germs. He says it is a great and glorious thing to wash, even in a swimming bath and without soap. In the second-class bath each bather contaminated the water with 6,000,000,000 bacteria. They are mainly small boys, which implies that the skin of the small boy in the second class is at least twice as dirty as that of the more respectable bathers in the first class. One has only to see the small boy before and after bathing to be convinced of this fact. He describes the methods in which the contamination takes place, and suggests an ideal bath where this might be avoided. The bacteria that were found were mostly the white staphylococci, and colon bacillus at the end of the day. He thinks the feeling of stupor and fatigue after swimming in a public bath, as felt by some persons, is not due to the numerous microbes contained in the water, but to defective ventilation.

Medical Review of Reviews, New York.

March 25.

96 *Rudolph Virchow; An Appreciation. C. A. L. Reed.

96.—This article has appeared elsewhere. See THE JOURNAL of February 28, title 30, p. 606.

Cleveland Medical Journal.

March.

97 Some Remarks on Hypernephroma or Adrenal Tumor of the Kidney. A. P. Ohlmacher.
98 Two Cases Illustrating Certain Relations of Syphilis and Epilepsy. H. S. Allen.
99 A Case of Lead Poisoning and Epilepsy, with Remarks on Saturnine Epilepsy. W. C. Gill.
100 Annual Address of the President of the Academy of Medicine of Cleveland. F. E. Bunts.
101 The Chemical Characters of the Fluid of a Cystic Kidney. Torald Sollmann.
102 The Symptoms and Diagnosis of Rhino and Laryngeal Diphtheria. E. L. Mather.

American Medical Compend, Toledo.

March.

103 Graves' Disease. B. B. Leonard.
104 Variola, Varioloid and Varicella. J. T. Woods.
105 The Oligemic Uterine Zones. Byron Robinson.

Occidental Medical Times.

March.

106 Report of an Epidemic of Acute Anterior Poliomyelitis. Alice M. Woods.
107 Gonorrheal Rheumatic Purpura. George L. Eaton.
108 The Ocular Manifestations of Syphilis. Wm. Ellery Briggs.
109 Some Interesting Cases of Insomnia. Francis Crosson.

New England Medical Monthly, Danbury, Conn.

March.

110 Compound Fractures of the Bones of the Hand or Foot. Thomas H. Manley.
111 Preventive Medicines and Measures. J. R. Hayes.
112 Lung Affection and Wasting Diseases. S. E. Fowler.
113 Report of a Case of Typhoid Fever Treated with Acetozone. Joseph A. Frasier.

Journal of Medicine and Science, Portland, Me.

March.

114 Recent Development in the Study of the Relationship between Chemical Constitution and Physiological Action of Organic Compounds. Virgil Coblentz.
115 Report of Part of the Operative Cases Treated at the Maine Eye and Ear Infirmary During December, 1902. E. E. Brown.

Medical Herald, St. Joseph, Mo.

March.

116 Gallstones; Their Pathology, Diagnosis and Treatment. W. J. Alexander.
117 Compulsory Vaccination. John D. Seba.
118 Case of Acute Catarrhal Cholangitis, with Remarks on Jaundice. J. S. Triplett.
119 The Pennyrile Doctor. I. R. Coleman.
120 A Case of Fibroid Tumor with Pyosalpinx and Ovarian Abscess. Herman E. Pearse.
121 *Hyperplasia and Hypertrophy of the Uterus. Charles G. Geiger.
122 The Possibilities of the Normal Salt Solution. L. Clyde Davis.
123 The Treatment of Septic Peritonitis. J. B. Boucher.

121.—See abstract in THE JOURNAL of January 17, p. 189.

Albany Medical Annals.

March.

SYMPOSIUM ON ARTERIOSCLEROSIS.

124 The Early Diagnosis and Symptoms of Arteriosclerosis. De Lancey Rochester.
125 Arteriosclerosis and the Heart. Glentworth R. Butler.
126 Arteriosclerosis and the Kidney. Irving P. Lyon.
127 Arteriosclerosis and the Digestive System. Charles G. Stockton.
128 Arteriosclerosis of the Nervous System. William Browning.
129 Arteriosclerosis and Mental Disease. Adolf Meyer.
130 Pulsus Infrequens. Thomas E. Satterthwaite.

Iowa Medical Journal, Des Moines.

March 15.

131 The Mastoid. F. E. V. Shore.
132 Typhoid Fever. T. J. Snell.
133 A State Board of Medical Examiners. L. W. Littig.
134 Reports on Compound Fracture of Skull. J. W. Starr.
135 Formalin Injections in the Des Moines Hospitals. Lewis Schooler.

Canadian Journal of Medicine and Surgery, Toronto.

April.

136 Congenital Dislocation of the Hip. B. E. McKenzie.
137 Medicine in China. James Menzies.
138 Resuscitatioln of Newborn Infant After Thirty-five Minutes' Immersion. A. J. Harrington.

Carolina Medical Journal, Charlotte.

March.

139 Cornual Pregnancy, with Report of a Case. Stuart McGuire.
140 The Causes and Complications of Gout. John M. Upshur.
141 Glycocholate of Soda. Charles I. Hill.
142 The Mechanics of Mercury in Syphilis. Thomas W. Murrell.

Medical Sentinel, Portland, Ore.

March.

143 Acute Inflammatory Rheumatism and Its Treatment. J. S. Kloeber.
144 Obstetric Anesthesia. W. H. Ewin.
145 A Brief Review of the Recent Literature on Typhoid Fever, and Some Notes on the Treatment of the Disease. Wm. O. Spencer.
146 Adenoids and Their Treatment. J. F. Dickson.
147 General Paresis. Henry W. Coe.
148 Tuberculosis. W. C. Buchly.

Canadian Practitioner and Review, Toronto.

March.

149 Tic Douloureux (Trigeminal Neuralgia) Removal of the Gasserian Ganglion; Recovery. Herbert A. Bruce.
150 Premonitory Symptoms of Failure of the Heart in Diphtheria. Frederick Fenton.
151 Mastoiditis Due to Gonococcus. Charles Trow.
152 Three Cases of Pyloric Obstruction. George A. Bingham.

Medical Age, Detroit, Mich.

March 25.

153 A Case of Diabetes Mellitus with Autopsy. T. E. Oertel and E. E. Murphey.
154 Insanity in Children. M. R. Crawford.
155 Remarks on the Relation of Eye-Strain to Epilepsy, Insanity, etc. William Cheatham.

Southern California Practitioner, Los Angeles.

March.

156 Robert R. Dorsey, M.D.—Tribute from Friend and Classmate. LeMoyne Wills.
157 A Review of Recent Progress in the Surgery of the Gall Bladder and Bile Ducts. Andrew S. Lobingier.
158 Cholelithiasis. George H. Scott.
159 Mineral Waters in Medicine. C. E. Winslow.
160 Notes on Medical Study in Vienna. W. W. Roblee.
161 The Pestis Bacillus. Ernest S. Pillsbury.
162 The Ideals of Citizenship. J. H. McBride.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

March 21.

1 *Theories of Immunity and Their Clinical Application. A. S. Grunbaum.
2 The Conditions Which Modify the Characters of Inflammations of the Skin and Their Influence on Treatment. H. Radcliffe Crocker.
3 Congenital Goiter. John T. Hewetson.
4 Six Cases of Goiter, One Associated with an Attack of Acute Myxedema and Five Successfully Treated with Thyroid Extract. Ed. Marten Payne.
5 *The Morbid Anatomy of Erythromelalgia Based upon the Examination of the Amputated Extremities of Three Cases. H. Batty Shaw.
6 Prevaccinated Smallpox. J. Duncan Howe.
7 *Note on the Detection of Raw Milk and Formaldehyd. J. E. Saul.

1. **Immunity.**—This first lecture by Grunbaum gives the theories of immunity and a detailed description of Ehrlich's theory with schematic illustrations, showing the different active elements assumed to exist by the theory. The article requires close reading for a proper understanding of it.

5. **Erythromelalgia.**—In three cases of such severity that amputation had to be performed the feet were carefully studied by Shaw, who finds that the changes in the nerves described by some writers were not present, but there were decided vascular changes, which were present in all. These were mostly an increase in the intima of the arteries, and occasionally thrombosis and changes in the inner coat of the veins. There was no nerve degeneration or any suggestion of increased fibrous tissue in the nerve trunks. He thinks, from a consideration of the reported cases that it would appear that erythromelalgia when occurring independently of central nervous change is associated with but one morbid picture, that of local vascular change.

7. **Raw Milk and Formaldehyd.**—Saul reports an interesting reaction of raw milk, which he thinks may be practically useful. On treating milk with a solution of orthomethylaminophenol sulphate and then adding a hydrogen peroxid solution a very vivid red color is produced. Milk that has been previously boiled and cooled remains uncolored, a faint pink only developing on standing. The red color is so marked that as little as 1 per cent. of raw milk if added to heated milk can be detected at ease. A convenient way to apply this is as follows: To 9 or 10 c.cm. of the milk add 1 c.cm. of a recently prepared 1 per cent. aqueous solution of orthomethylaminophenol sulphate and then one drop of commercial hydrogen peroxid solution (about 3 per cent.). The red color develops within 30 seconds if there is any raw milk present in the

sample. There should be no excess of hydrogen peroxid, as it tends to weaken the color. Dilute acids do not affect, caustic alkali destroys the color. The presence in the milk of boric acid, borax, formaldehyd, or sodium carbonate or bicarbonate does not interfere with the reaction. If the milk has become sour, the acid should be neutralized. The temperature was noted at which the active agent in the reaction was destroyed. The milk maintained at 70 C. for one hour reacted readily, but if kept at 75 C. for half an hour, it failed to give the color. It would appear that milk loses its power to react at about the temperature at which enzymes are destroyed. It may be difficult to get the aminophenol derivative above mentioned. He thinks it might be convenient to use the photographic developing agent sold under the name of "ortol," which appears to be a mixture of orthomethylaminophenol sulphate with quinol. The latter body may be removed from it by extraction with ether, but the presence of a small quantity would not interfere with the test, and might even slightly assist it. On adding nine or ten volumes of milk to a 1 per cent. solution of the salt and allowing the mixture to stand, a pink color is gradually produced in the presence of formaldehyd. The reaction is distinct where the milk contains a 1 per cent. solution in 100,000 of formaldehyd or more. The time necessary for the reaction varies with the temperature. It is really an acceleration of the development of a color which ultimately is produced in milk free from formaldehyd. This and the fact that formaldehyd shares the property with other aldehydes and ketones seriously diminishes its value as a test. One, therefore, can not compare it with the modified sulphuric acid reaction of Hebner or the recent "amidol" test of Manget and Marion.

The Lancet, London.

March 21.

8 Theories of Immunity and Their Clinical Application. A. S. F. Grunbaum.
9 *Some Points in the Anatomy and Pathology of the Vermiform Appendix. W. McAdam Eccles.
10 *The Conditions Which Modify the Characters of Inflammations of the Skin, and Their Influence on Treatment. H. Radcliffe Crocker.
11 A Case of Acute Splenic Anemia Terminating Fatally with General Bacterial Infection. Herbert P. Hawkins and C. G. Seligmann.
12 *The Height of the Diaphragm in Relation to the Position of Certain Abdominal Viscera. Charles T. Andrew.
13 Angina Pectoris: A Criticism and a Hypothesis. E. H. Colbeck.
14 A Climatological Aspect of the Nauheim Treatment of Diseases of the Heart. Leslie C. Thorne.
15 Diabetic Gangrene of the Toe; Amputation of the Toe; Recovery. Charles Fisher.

9. **The Appendix.**—The Hunterian lectures, the first two of which appeared in the "Lancet," March 14, describe the anatomy of the organ, the characters of the normal appendix and the theories of its physiology. Eccles thinks that probably the real function is in part absorptive and in part excretive. In the second lecture the etiology of the inflammation is discussed and he believes that every case of so-called appendicular colic, slight appendicitis, etc., is in truth an actual inflammation of the appendix of bacterial origin. He finds from many authorities that the colon bacillus is the most common infecting agent, 94 per cent., tubercle bacillus 2 per cent., staphylococci and streptococci each 1.5 per cent., and in still lesser proportions the pyocyaneus and prodigiosus. Tuberculosis of the appendix may be only a part of a general infection. Its secondary occurrence is by no means rare. He holds that calculi and concretions are always formed within the lumen. Actinomycosis may occur. One effect of the inflammation is obliteration of the lumen of the appendix, and this may produce a spontaneous cure and is a normal tendency in later life. In order to bring about immunity to a recurrent appendicitis the whole of the lumen should be obliterated. This is not by any means always the case. Secondary abscesses may be due to leaving behind some foci of infection and may occur after complete removal of the organ. The anemia in the appendicitis patient is, he thinks, due to the same cause as the appendicitis, a disordered state of the alimentary tract. He thinks leucocytosis has a certain value in the diagnosis.

In this third lecture, the association of appendicitis with joint lesions and the complications of pregnancy and parturition are first noted. Its association with the latter condition is by no means uncommon and is of very serious import The diagnosis is seriously embarrassed in the later months of pregnancy and the history of a previous attack is of the greatest assistance here. Miscarriage or premature labor is almost certain to occur and this brings about a danger to both mother and child. The wisest course, he thinks, is to operate on all cases or those suspected cases in pregnancy at the earliest possible moment, disregarding the fact of the gravid uterus. He does not see any use in artificial emptying the uterus before operation. The somewhat difficult question as to the relation of appendicitis to life insurance is discussed briefly. New growths are described. These are more commonly malignant than innocent, though neither are frequent. Secondary neoplasms are not so rare. The question arises whether previous attacks of inflammation predispose to their occurrence, but the records are deficient as regards this point. While there is scanty evidence of appendicular calculi being a predisposing cause of carcinoma, as biliary calculi are supposed to be, there is something in favor of the theory that previous attacks of appendicitis may have their influence. Hernia of the appendix is discussed at some length. It is probably connected with elongation. Adhesions are common and inflammation of the appendix in the hernial sac is decidedly common. Usually on opening the sac the appendix is readily recognized, but at times, owing to adhesions which are very common and locking together of tissues, it is difficult to be sure what structure is being dealt with. If operation for a radical cure of a non-strangulated irreducible hernia is undertaken and the appendix found in the sac it may be returned to the abdomen or amputated in the usual manner and the stump returned, which is a better plan. If the tube is found adherent, and especially if not of natural size, it is well to free it from its attachments and to remove as much as can be readily drawn down into the sac.

10. **Skin Inflammations.**—This third lecture by Crocker treats of the action of arsenic, which has its inconveniences in producing pigmentation and even keratosis, but it is valuable in many conditions, among which he enumerates certain forms of angioneuroses, recurring sweat eruptions, pemphigus, dermatitis herpetiformis, etc. He thinks its indiscriminate use, however, makes it more important to point out where it is useless. He sees no good of it in discharging eczemas or wherever there is gastric irritation. He prefers in giving it in liquid form, such as Fowler's solution. Salicin and the salicylates have their value in many conditions and are most likely to be successful in cases of microbic origin, such as psoriasis, lichen planus, pityriasis rosea. In psoriasis the salicylate should be given in dilute doses of 15 gr. three times a day, then increased to 20 or 30 grains, though hardly ever so much as the latter is required. In the majority of cases its action is quicker and it is more successful than arsenic. In some cases of lichen planus it is of use. He thinks it is likely that some drugs breaking up in the organism, like aspirin, may have some similar effects. Thyroid extract has not met expectations, but he has found it decidedly useful in some cases of psoriasis and in Willan's and Hebra's prurigo, eczema on a congenitally ichthyotic skin and lichen acuminatus and has found it more valuable in lupus vulgaris than any internal medication he has given. Ichthyol is sometimes beneficial in hyperemic diseases like acne and in some sweat eruptions. In extensive dermatitis there is no drug he has a higher opinion of than quinin in good-sized doses of 5 to 10 gr. and in an effervescing citrate of potassium mixture. He remarks in regard to subcutaneous and intermuscular injections and says there are certain measures that ought to be adopted in all cases of widespread skin inflammation. These are rest, equability of temperature; sudden changes of temperature are bad in certain cases. For local treatment he thinks we should have a definite aim. Is it the hyperemia that is to be subdued, the exudation to be dried up or the suppuration to be stopped, or is it some microparasite that is to be destroyed without increasing the inflammation? Regard should be paid to idiosyncrasy, and he gives, in conclusion, some general deductions: That a large proportion of skin inflammations is of mixed origin, frequently a microbic element exists, and some microbes may pro-

duce different forms, according to the mode of attack. It requires a suitable soil, which varies with the age of the individual and the character of the skin. Intestinal and other visceral toxins and ptomaines play an important and often unsuspected part, acting through the vasomotor nerves rather than directly through the skin. The cerebral nervous system acts chiefly as a control influence over the sympathetic system as regards the intensity of the eruption, but, with few exceptions, the nervous system, whether vasomotor or cerebral, has but little influence on the character of the eruption, though it does on its distribution and intensity. The character of the eruption is mainly due to individual peculiarities or proclivities not always explainable. Many general eruptions are for a short or long time of local origin, occupying only a small area, therefore early treatment is desirable. The principles of treatment depend mainly on an appreciation of the relative importance in any one case of the microbic, the personal, the nervous and the toxic elements. The most reliable and comprehensive specifics are arsenic, salicin, thyroid extract, quinin in large doses and iodid of potassium. The first two have a wide range. Except as regards pus eruptions and those demonstrably of micro-parasitic origin the character of the local treatment depends comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity and localization being the most important elements. The microbicide should be non-irritating, or should at least be capable of being at once neutralized, otherwise it may set up more inflammation than it controls. It is in comparatively few circumscribed microbic diseases, such as impetigo contagiosa, boils and carbuncles, that the microbicide is the sole curative agent. In all widespread forms of dermatitis rest and equability of temperature are most important and often the essential curative agents. Finally, as we study diseases of the skin as we do those of other organs, we will find that their treatment can be carried out best on the sound basis of pathology and that species will have a diminishing importance.

12. **The Height of the Diaphragm.**—Andrew has studied the height of the diaphragm in nine cases, and finds a wide variation which is well marked in female subjects. In two females the height of the dome in the right mammary line varied from the fourth rib to the sixth interspace, whereas in the two males it did not extend down lower than the fifth rib. Secondly, it is remarkable that so many abnormalities in the position of the viscera should have existed in such a small number of cases and chiefly in females. In the 7 cases examined there were 2 distinct and 2 indistinct cases of Riedel's lobe of the liver; 2 affections of the gall bladder and 1 gastric abnormality. The measurements of the recti muscles as an indication of the strength of the abdominal muscles are interesting. In every case they were smaller in the females than in the males and especially where Reidel's lobe was present. The distance of the great curvature of the stomach and the transverse colon below the xiphoid cartilage was also greater in the females than in the males.

Intercolonial Medical Journal of Australasia, Melbourne.

February 20.

16 Insanity in Its Relation to the Practitioner, the Patient, and the State. W. Beattie Smith.

Presse Medicale, Paris.

17 (No. 15.) *Pseudarthrose flottante (floating) de la hanche (hip) consecutive à une pyarthrite ostéomyélitique du jeune age (in early childhood). Ducroquet and Bezançon.
18 Les épidémies de colique saturnine. L. MacAuliffe.
19 *Agrafes osseuses (staple clasps for fractures). Jacoel.
20 *Une des causes de la crise médicale. E. De Lavarenne.
21 (No. 16.) Importance de certains signes (rheumatisme monoarticulaire) et réactions (épreuves des vésicatoires—blister test) dans le diagnostic de la tuberculose latente. J. Hobbs.
22 *Traitement de la phlébalgie. L'effleurage des veines. H. Hannequin.
23 *Action pathogène des rayons émis par le radium. J. Danysz.
24 Etiologie et prophylaxie du paludisme en Algérie. H. Soulie.
25 (No. 17.) Capacité fonctionelle du coeur (of heart) dans les affections valvulaires. P. Merklen.
26 Des troubles cardio-vasculaires d'origine digestive. G. Lyon.
27 Traitement de l'hydrocèle par le procédé de Doyen modifié. G. Faugère.
28 Traitement des métrorrhagies par l'adrénaline.
29 (No. 18.) L'alcool considéré comme aliment. H. Roger.
30 *La cryoscopie du lait (of milk) et ses applications. E. Parmentier.
31 Affections des oreilles (of the ears) et aptitudes au service militaire. G. Mahu.
32 (No. 19.) A propos de la crise medicale. E. De Lavarenne.
33 Assurances sur décès d'enfants (life insurance on children). P. Budin.
34 Clinique des maladies cutanées et syphilitiques. E. Gaucher.
35 *Rétrécissement (stricture) congénital de l'urètre chez l'homme (in man). P. Bazy.
36 *Visite aux musées (to the museums) d'Italie. Impressions médicales. F. Jayle and A. Gottschalk.
37 La médecine et l'art en Normandie. P. Desfosses.
38 *Technique de la chloroformisation.

17. **Floating Pseudo-Arthrosis of the Hip.**—A child sometimes presents the appearance and gait of congenital luxation of the hip joint, but palpation shows that there is no trace of a neck to the femur and it feels as if it had been decapitated. Radiography confirms this absence of the neck and also of the upper epiphysis of the femur. A scar is also found and the parents relate that in early infancy the child had a period of fever and restlessness terminated by the development of an abscess in the hip which opened spontaneously or had to be incised. As soon as it was evacuated the child appeared restored to normal health. The rapid recovery excludes the idea of tuberculosis. In one of the 4 cases described the mother had an abscess at the time and in another a vaccination pustule had become secondarily infected. In one of the cases abscesses developed simultaneously in several joints. The prognosis of this floating pseudo-arthrosis is very grave. There is no ankylosis and no tendency to the formation of a socket in the ilium owing to the absence of the neck and otherwise defective development of the head of the femur. One of the cases was treated on the mistaken diagnosis of congenital luxation, with the inevitable result of total failure of all attempts at reduction. The only treatment is the appliance devised for inoperable congenital luxation on the principle of Dupuytren's girdle. In taking the cast a socket for the top of the femur must be made in it and in the appliance, to hold the head of the femur down. Another important point is to hold the shoulder and pelvis at the proper distance apart. This is accomplished by having the corset reach to the axilla and making it a little higher on this side than on the other.

19. **Staples for Fractures.**—The agrafes described are of metal and resemble a broad U in shape or a letter E without the central projection. The shanks are pointed, with 4 projecting flanges so as to afford a strong hold in the bone. The secret of success in applying them in a case of fracture is to have the agrafe perpendicular to the line of the fracture. This prevents any pivoting on one shank and consequent displacement of the stumps. (See pp. 892-894, THE JOURNAL, April 4.)

20. **Newspapers and Fraudulent Advertisements.**—De Lavarenne comments on the way in which newspapers are penetrating to the remotest hamlets and the avidity with which they are devoured. Especially in country towns and villages the daily or weekly paper is read from beginning to end and the advertisements of nostrums, the seductive descriptions of the infallible cures and suggestion of symptoms have great influence over the reading public. Why apply to a physician and pay his fee and pay for his medicine when here is just the remedy the reader wants, the price is known beforehand, and a guarantee to cure is given? It is much cheaper and simpler to buy a bottle of the advertised nostrum. This evil is constantly assuming larger and larger dimensions in France, as elsewhere, with the colossal development of the daily press and the means of advertisement it offers. De Lavarenne hails with delight the recent legal decision at Breslau already mentioned in these columns in which an advertiser who promised to cure all cases of stuttering, under written guarantee, was fined and further advertising of such claims prohibited. The physicians who instituted the suit testified that in the present state of medical science it was impossible to cure, much less guarantee a cure every time. The suit was brought in the civil court, as a damage suit, not as usual in procedures against charlatans in the criminal court for illegal practice of medicine. He urges physicians in France to follow the example of their German confrères.

22. **Treatment of Phlebalgia by Effleurage of the Veins.**—Neuropathics and varicose subjects, as also those convalescing from phlebitis, are liable to suffer from "venous neuralgia," and

the best treatment is by light massage or effleurage. The strokes should be upward, and if very painful, they should be done in the bath. This treatment should not be instituted until after all inflammatory manifestations have long subsided. The hand is oiled with vaselin and under the light manipulations the part grows warm while the pain subsides. The pain is liable to recur after four or five hours, but repetition of the effleurage the next and following days will favor the resolution of the inflammatory exudate which causes the pain. Baths in case of phlebalgia should not cause a sensation of either heat or cold; the neutral temperature is peculiarly soothing. The effleurage prevents congestion and thus obviates recurrence of the phlebitis. The patient can apply it himself in time at the slightest intimation of congestion or pain and thus ward off recurrences or prevent phlebitis.

23. **Pathogenic Action of Radium.**—Danysz reported at the Paris Académie des Sciences that the radium rays have an intense action on the skin but that the underlying tissues were very little affected by them in his tests on animals. He, therefore, ascribes their action to the susceptibility of the nerves in the skin. The solutions of radium salts produced the same effect as the metal in tests on certain of the lower animals. Caterpillars became paralyzed and died when exposed to their radiations and the development of the anthrax bacillus was checked.

30. **Practical Application of Cryoscopy of Milk.**—Parmentier remarks that of the 350 millions of quarts of milk consumed annually at Paris, nearly 5 millions are taken by the hospitals and public charities. The purity of milk is, therefore, a peculiarly important question for the members of the profession connected with the hospitals. He has been making a very extensive study of the practical application of cryoscopy as a means of detecting adulteration and has become convinced that it is a simple, practical and reliable means of testing the quality of the milk. He has found that the freezing-point of milk is a constant figure, .55 to .56 C., whether Pasteurized or not, and milk with this freezing-point when drawn from the cow should have the same when delivered to the consumer. If the freezing-point is .52 the milk has been manipulated somewhere. The age, breed, food, etc., of the cow do not affect the freezing-point in normal milk, but it varies in case of disease in the animal or merely with a local inflammatory process. The freezing-point of both cream and skim-milk is the same, consequently cryoscopy does not reveal fraud in this respect, but it invariably indicates if the milk has been watered, and is the most exact and rapid method of determining this yet discovered. If the milk were adulterated with water containing just the right proportion of salts to keep the freezing-point at the right spot—which would be a difficult matter—the fraud then would be revealed by the taste, or by simple chemical tests. The research described was made with the ordinary technic of cryoscopy, not using an instrument of precision, as the aim was to bring this simple method of testing milk within the reach of every practitioner.

35. **Congenital Strictures of the Urethra.**—Bazy gives illustrations of the conditions observed in certain strictures of the urethra and a diagrammatic representation of the way in which they are probably formed. There are evidently some congenital bands or valves in the bulbar portion of the urethra which form the stricture. They are relics of the uro-genital membrane of embryonal existence. As in the rectum and elsewhere, the stricture may therefore be congenital, pathologic or traumatic.

36. **Medical Impressions of the Museums of Italy.**—Twenty fine photogravures illustrate this article, reproducing some of the famous paintings which portray medical or surgical scenes, the birth of Eve, the Circumcision, hospitals, miracles, etc. A preliminary sketch made by Raphael for his famous "Transfiguration" shows that he drew all the figures nude to study the muscular action before draping them in the finished picture. The group in the foreground is a mother and father bringing their son, "possessed of a devil," to be healed. The disciples, by gestures, express their inability to help her and point to the transfigured Lord above while the father supports the youth in the throes of an attack of convulsions. Another interesting picture from a medical point of view is "La Gravida," at Florence, one of Raphael's earlier works. In his great painting of the "Visitation," lifesize, at Madrid, the Virgin is also represented in an advanced stage of pregnancy. A work by Lorenzetti at Pisa portrays "The Triumph of Death." Three coffins lie open in the foreground, the cadavers within in various stages of decomposition, while seven cavaliers, their horses and dogs, inspect them.

38. **Technic of Chloroformization.**—The preparations, technic of anesthetization and the accidents and measures to prevent and treat them, are listed in a large table convenient to hang up for hasty reference.

Semaine Medicale, Paris.

39 (XXII, 8.) *Instruction in Neurology in U. S. G. Guillain.—L'état actuel de l'enseignement de la neurologie aux Etats-Unis.

40 (No. 9.) *Un nouveau procédé de cure radicale de la hernie inguinale par occlusion partielle du canal inguinal et réduction de ses dimensions à celles du cordon spermatique. E. Estor (Montpellier).

41 Letter from America. Le traitement chirurgicale de la lithiase biliaire. F. Munch.

42 (No. 10.) L'edème dur (hard) traumatique du dos de la main (of the back of the hand). L. Chelnisse.

39. **Neurologic Instruction in This Country in Comparison with Europe.**—Guillain remarks that in Europe neurology is too often regarded as a special branch of medicine, rather in the line of a luxury, a superfluity that can be dispensed with, while in this country the student is expected to study it as part of the regular course. He lauds the practical way in which it is taught and the unexcelled facilities for instruction here, remarking in conclusion: "While fifteen or twenty years ago neurology did not exist in the United States or scarcely existed here, now there is such activity in it that we can foresee the day, and not very distant, when the new generations will take the rank in the international scientific movement justified by the intelligent methods of instruction and the energy in their work which distinguish the American race." Guillain has been visiting the leading medical centers from Boston to San Francisco, and draws a very attractive picture of the present status of instruction in neurology and psychiatry in the hands of our leading men, whom he cites in turn, knowing that their names are almost as familiar in Europe as at home.

40. **Estor's Method of Radical Treatment of Inguinal Hernia.**—The sac is detached as high as possible and resected without previous incision of the aponeurosis of the oblique muscle. Two wire threads are then inserted in the pillars from the front backward, crossed in the aperture of the ring and passed then through the abdominal wall, from the rear forward, emerging well above and outside of the external inguinal orifice. The entire abdominal wall, comprising all the layers, is then drawn down and fastened over the inguinal ring, forming a solid wall of muscle and aponeurosis over the inguinal ring, leaving only the opening absolutely necessary above the pubis for the emergence of the spermatic cord. Five parallel catgut or silk threads are then woven in, about 1 cm. apart, to strengthen the aponeurosis, and the skin is sutured. Estor has performed this operation 24 times. The immediate results were perfect except that in a few cases the testicle and cord appeared to be swollen for a few days, but this soon subsided without further symptoms. There was an insignificant catgut stitch abscess in three cases, but he never found it necessary to reopen the wound. The re-enforced abdominal wall is even more solid than the normal wall, and the results to date have been fine in every respect, nearly two years in his oldest cases. Eight of his patients were children. The article is accompanied by five cuts.

Jahrbuch f. Kinderheilkunde, Berlin.

Last indexed, p. 13¼.

43 (LVI, 6.) *Ein Schaukelsessel (rocking chair) für kleine Rachitiker und Schwächlinge (for weakly children). A. Epstein.

44 Ueber die Auslösung der Milchsecretion (lactation) bei Mutter und Kind. W. Knoepfelmacher.

45 Ueber Wundscharlach (wound scarlet fever) bei Verbrennungen (burns). C. Leiner.

46 Ueber Isolyne bei Infections-Krankheiten der Kinder (in children's infections). Ibid.

47 Meningitis beim Neonatorum. L. Goldreich.

48 Zur Schwellung der peripheren Lymph-Drüsen im Säuglingsalter (swelling of glands in infancy). A. Baer.

49 Functions of Child's Stomach in Digestive Affections. T. v. Hecker.—Ueber die Functionen des kindlichen Magens bei Verdauungskrankheiten. Tables to accompany article in No. 5. Fifty-four cases.
50 (LVII, January.) *Abnormal Chondral Ossification in Rachitis. D. Pacchioni.—Beschreibung und Pathogenese der Veränderungen der chondralen Verknöcherung bei der Rachitis.
51 *Influence of Sterilization of Milk on Infant Metabolism. W. Cronheim and E. Müller.—Untersuchungen über den Einfluss der Sterilisation der Milch auf den Stoffwechsel des Säuglings, under bes. Berücksichtigung der Knochenbildung.
52 *Diagnostische Betrachtungen über 3 seltene Formen infantiler Cardiopathien. C. Hochsinger.
53 Seltener Fall von Erythema nodosum. E. Führmann.
54 Anaerobic Butyric Acid Bacteria in Normal Stools. F. Passini.—Ueber das regelmässige Vorkommen der verschiedenen Typen der streng anaerobischen Buttersäurebakterien im normalen Stuhl.
55 *Zur Casuistik der Phosphaturie im Kindesalter (in a child). Cornelia de Lange.
56 (February.) Ueber die Behandlung des Scharlachs mit einem Scharlach-Streptokokkenserum (serum treatment of scarlet fever). P. Moser. (Commenced in preceding number.) Preliminary report mentioned in THE JOURNAL, xxxix, p. 1145.
57 *Ueber Sauerstoff- (oxygen) Inhalationen bei Kinderkrankheiten (in children's diseases). A. Hecht.
58 *Eine Scharlach- (scarlet fever) endemie auf der Masern- (measles) Station. A. Doebert.
59 *Ueber den Werth der systematische Lumbal-Punktion bei der Behandlung des Hydrocephalus chronicus internus bei Kindern. J. v. Boky.

43. Rocking Chair for Weakly Children.—Epstein urgently recommends a low rocking chair with arms and a broad open space between the back and the seat, for children between 1 and 3 years old as a remarkably effective means of developing the muscles and especially strengthening the back. The child sits in it, facing the back, his feet hanging or touching the floor, or resting on a step made for the purpose on the long rockers. He soon learns to balance himself and rock, and, as he holds on by the back and arms, he acquires an actual military attitude, head up and spine straight, while his delight in the rocking movement inspires him to constantly renewed exercise.

50. Morbid Process in Rachitis.—Pacchioni asserts that the fundamental morbid process in rachitis is not in the bone but in the cartilage, in the protoplasm and in the nuclei of the cartilage cells.

51. Effect of Sterilization of Milk.—Cronheim publishes his research, which confirms the fact that the biologic properties of milk are impaired by the process of sterilization. The exact mechanism is not known, but clinical experiences have established that the lime metabolism is unfavorably influenced. Sterilized milk is not a suitable food for infants for long periods at a time.

52. Rare Forms of Infantile Cardiopathy.—Radioscopy explained the contradictory symptoms in the cases described. In one they were due to defective development of the septum in the common arterial trunk. The infant was 11 months old, and exhibited congenital cyanosis. The origin of the arteries was also on the opposite to the normal side, and the first portion of the aorta was rudimentarily developed, with vicarious enlargement of the pulmonary and permeable ductus arteriosus, with resulting hypertrophy of the heart. In the second case, the boy of 13 had still an opening in the ductus arteriosus, with an aneurismal dilatation of the pulmonary artery and congenital stenosis of the isthmus of the aorta. In another case a boy of 9 had an enormously hypertrophied heart, with adhesions between the pericardium and chest wall, signs of obsolete tuberculous pleurisy. The mitral and aortic valves were also insufficient, and the entire heart was displaced to the left and fastened by tuberculous bands.

55. Phosphaturia in a Child.—The little patient was a girl, not quite 5, and phosphaturia was pronounced for the nine months during which she was under observation. She suffered from helminthiasis, and there is a possibility that this fact may have had some connection with the phosphaturia

57. Oxygen in Diphtheric Stenosis.—In Hecht's experience with 9 cases of diphtheric laryngeal stenosis, the respiration was favorably affected in 2. Study of the details of these cases shows that inhalation of oxygen is always indicated when the heart action is growing weak, manifested by tachycardia. It should be kept up until the beat grows slower and, of course, be suspended if it increases the tachycardia.

58. Simultaneous Scarlet Fever and Measles.—In the epidemic of 10 cases of scarlet fever in the measles ward, it was noticed that diarrhea preceded the exanthem in 6. The fleeting character of the eruption was also noticeable and the severity of the complications. Doebert's experience warns that the simultaneous occurrence of these two diseases must be carefully guarded against.

59. Value of Systematic Lumbar Puncture in Hydrocephalus.—When the hydrocephalus is congenital, the alterations in the parts are usually so severe that merely a palliative effect is to be hoped for. But in cases of the condition following meningitis or other cause, it may be possible to realize a complete cure by this means. In one case described all symptoms of the chronic hydrocephalus had vanished by the end of eight months, during which time 283 c.c. of cerebrospinal fluid had been withdrawn in eleven punctures. In another case a boy of 2, with hydrocephalus consecutive to cerebrospinal meningitis, showed remarkable improvement until his death from an intercurrent infection. He was treated in the course of two years by lumbar puncture repeated fifteen times, with escape of 660 c.c. of fluid. Concetti repeated the puncture fifty-three times in two years in one case with marked benefit.

Muenchener Med. Wochenschrift, Munich.

60 (L, 8.) *Prognosis of Gin Liver. H. Ehret. Zur Kenntniss der Prognose der atrophischen Leber-Cirrhose.
61 Ueber die Wiener'sche Methode zur Virulenz-Steigerung (increasing) der Danysz-Bacillen. M. Oettinger.
62 *Zur mikroscopischen Technik. T. Sato.
63 *Laryngeal Tuberculosis in Pregnant Women. Löhnberg.—Die Kehlkopfschwindsucht der Schwangeren.
64 Electric Appliance for Inspecting the Eye. Von Ammon.—Eine einfache elektrische Beleuchtungsvorrichtung für Augenuntersuchungen.
65 *Training and Treatment of Hereditarily Burdened Children at Home and in the School. H. Pfister.—Die Erziehung und Behandlung seelisch Belasteter in Haus und Schule. (Commenced in No. 7.)
66 (No. 9.) *Ueber die mechanische Sterilisierung der Gummihandschuhe (of rubber gloves) und ihre Verwertung in der Praxis. O. Wandel and O. Hoehne.
67 *Spinalgie als Früh (early) Symptom tuberkulöser Infektion. J. Petruschky.
68 Theocin (theophyllin), ein neues Diureticum. C. Doering.
69 *Ein Beitrag zur Casuistik der Pankreas-Geschwülste (tumors). C. Ehrlich.
70 *Die Skopolamin- (Hyoszin) Morphium-Narkose. Schneiderlin.
71 *Suture of Femoral Vein and its Indications. A. Schönwerth.—Ueber die Naht der Schenkelvene am Leistenbande und ihre Indikationen.
72 Ueber Salmiakgeistvergiftung (Intoxication with water of ammonia). Reckzeh. One case.
73 *Behandlung der fibrinösen Pneumonie mit Hetol-Injectionen. Krone.
74 Ueber Hautgeschwüre (cutaneous ulcers) gonorrhoischer Natur. O. Salomon.
75 Ist der Lupus erythematodes ein Tuberkulid? A. Gunsett.—Argues No.
76 Zur Ätiologie der professionellen Erkrankungen (affections) im Medianus-Gebiet (domain). Steiner.
77 Casuistischer Beitrag zur urämischen Amaurose. Roscher. One case.
78 (No. 10.) *Movability of Grooved Liver. Penzoldt.—Ueber die Beweglichkeit des abgeschnürten rechten Leberlappens.
79 Fall von "interstitieller Gravidität" geheilt durch Operation. Von Holst.
80 *Wie lässt sich die Rectum-Exstirpation zu einer aseptischen und unblutigen Operation gestatten? F. Wenzel.
81 *Indikationen für operativen Eingriffe beim Rektum-Carcinom. O. Witzel.
82 Beitrag zur Ovariotomie in der Schwangerschaft (pregnancy). W. Thomass. One case.
83 Comparative Tests of Disinfecting Power of Old and New Preparations of Mercury and Phenol. F. Hammer.—Vergleichende Versuche, etc. Quecksilber und Phenol-Präparate.
84 Ueber die Beziehungen zwischen (relations between) Epilepsie und Migräne. W. Strohmayer. Frequent coincidence.
85 Anomalies in the Cardinal Veins. S. Oberndorfer.—Varietäten im Gebiete der unteren Hohlvene.
86 *Beitrag zur Symptomatologie des Prostata-Carcinoms. H. Doerffler.
87 Zur Kasuistik der Prostata-Geschwülste im Kindesalter (tumor in a child). L. Levy.
88 Outline of Plan for Organization of the Profession in Bavaria for Economic Purposes.—Entwurf des Planes einer Organisation der bayer. Aerzte bezw. Aerztevereine zu wirtschaftl. Zwecken.

60. Prognosis of Gin Liver.—The postmortem findings in the case described revealed unmistakable evidence of old liver cirrhosis with atrophy, confirmed also by the history of an abrupt, stormy attack of the symptoms familiar in this affection. The man was 42 years old at the time and an immoderate drinker. He abandoned the use of alcohol on his physician's advice, and all the symptoms gradually retrogressed, until he

had clinically recovered. Thirty years later he succumbed to a rapidly developing carcinoma of the esophagus, without ever having exhibited any further symptoms of a liver affection in the interim. The liver was found adherent to the spleen and the development of collateral circulation through this organ may have been responsible for the absence of congestion and ascites. If the morbid process is arrested before all the liver tissue is destroyed, it is evidently possible for the remaining portion to compensate it and for the patient to clinically recover. Total abstinence from alcohol is the *sine qua non*. The morbid process is liable to continue even with small amounts of alcohol, and it is far more difficult for a drinking man to restrict himself to continual small amounts than to accustom himself once for all to total abstinence. Besides abstention from alcohol, small doses of digitalis and potassium iodid will be found useful, the former improving the arterial circulation through the liver and the latter stimulating the metabolism in general. Congestion in the portal region is best combated by laxative salts (Carlsbad, Marienbad, Vichy, Vittel), or by calomel. Withdrawals of small amounts of blood over the region and at the anus are also useful. The ascites should be treated by puncture, systematically repeated whenever the accumulated fluid reaches a certain amount, as only under these conditions is puncture really curative. It is very rarely that the puncture can be substituted by diuretics, although the latter should be tried and also sweat baths in certain cases. The peritonitis, which so frequently accompanies liver cirrhosis, is an important aid in the cure, as it results in adhesions which in turn aid in collateral circulation. If the congestion and ascites can not be conquered in any other way, Talma's operation should be performed. The physician should be convinced that liver cirrhosis is far from having the hopeless outlook formerly attributed to it.

62. **Technic of Microscopy.**—Sato has found that a sheet of colored glass interposed between the mirror and condensor will render the microscopic field as clear and distinct by artificial light as by daylight. The complementary color to the stained preparations is usually the best, but others are frequently equally effective. He has found gelatin paper very nearly as good as glass, and adds that unstained gelatin paper will be found a useful substitute for cover glasses.

63. **Laryngeal Tuberculosis in Pregnant Women.**—Löhnberg has had occasion to observe 5 cases of laryngeal tuberculosis in pregnant women in the course of two years. In 2 there were no indications of tuberculosis elsewhere, and in the rest and in those reported by Türk the laryngeal lesions far overshadowed the others. He has collected 21 similar cases in the literature. The evidence is in favor of the assumption that pregnancy affords a predisposition to this affection and whips into a gallop a latent process. Further, that every pregnant woman with diffuse laryngeal tuberculosis is irremediably doomed, and possibly also those with merely a single tubercle. The only treatment is the palliative use of a menthol-orthoform emulsion, but this lost its efficacy after a time in his cases, and relief was obtained with morphin and tablets of cocain alone. The only effective measure against the hopeless laryngeal tuberculosis of pregnant women is that tuberculous women should not marry, and, if married, should not conceive. Pregnant women should be carefully examined at the slightest suspicion of trouble in the throat, and should be placed in the most favorable conditions of nourishment and hygiene. In case of advanced laryngeal tuberculous lesions, extensive use of every means to allay the pain is certainly indicated.

65. **Training and Treatment of Inherited Nervous or Mental Weakness.**—Serious injury may be inflicted on a child with a hereditarily weak nervous system by even a moderate box on the ear. The concussion of the brain may have a long train of effects, especially when combined with the pain, mortification and anger usually accompanying such a scene. Plutarch used to complain that the slaves that were not good for anything else were made teachers for the children, and Martin Luther and other writers since have echoed his experience in regard to teachers. A Suabian writer named Häberle kept a record of the number of blows he received during his childhood, and he states that they reached a total of 911,527 with a cane, 124,010 with a switch and 1,151,800 boxes on the ear. At the present day the children suffer more from overtaxing of the brain than from corporal punishment. What is easy for the normal child is a direct strain on children with a nervous or mentally defective heritage. Koller found 59 per cent. of such children among 370 supposedly healthy school children, and Benda 50 per cent. in the upper grades. The mental work required of such children should be graduated to their capacity, and even physical exercise should not be allowed to fatigue them. They should have frequent but brief exercise in the open air, with rest afterward. In selecting an occupation, young people with an overburdened heredity should be guided away from those requiring much nervous or mental strain. In regard to marriage, young men showing only moderate effects of such heredity should be advised to marry young, while those with pronounced manifestations should be warned against matrimony, as the cares of married life outbalance for them its advantages. Girls of this class should marry late, not until after 24 or 25, to allow them to attain their full physical development before encountering the stress of pregnancy and childbirth. In all cases, marriage into a healthy family is indispensable. The crossing of two such morbid strains is disastrous. The above are only a few points out of Pfister's long article, which is based on his extensive experience as assistant physician to the psychiatric clinic at Freiburg.

66. **Mechanical Sterilization of Rubber Gloves.**—Experiments at Kiel have demonstrated that rubber gloves can be effectively sterilized after using by washing them, still on the hands, with soap and water for a few minutes. It is not necessary to use a brush or antiseptics. After washing them on the hands they are pulled off wrong side out and washed on this side, and filled with water to discover any crack. They are then dusted with talcum powder and wrapped separately in a sterile cloth, when they are ready for use again at any time. The tabulated tests showed that the smooth surface of the rubber does not retain germs like other substances, but allows of perfect cleansing by merely mechanical rinsing. The tests were made with staphylococci and streptococci, the colon, prodigiosus and other pathogenic bacteria.

67. **Spinalgia as Early Symptom of Tuberculous Infection.**—Petruschky has noticed that "pains between the shoulder blades" is a frequent complaint of persons who later exhibit symptoms of tuberculosis. He thinks that they have some connection with a primary tuberculous inflammation of the bronchial glands, and can, therefore, be accepted as one of the earliest signs of the infection. At a recent autopsy he discovered recent secondary infection of one apex, with evidences of old tuberculous lesions in the bronchial glands, although nothing during life had suggested the possibility of tuberculous infection, and the child had died from scarlet fever. He affirms that it is possible to detect the presence of the primary bronchial involvement by the spinalgia referred to above, the typical sensitiveness to pressure of certain vertebræ between the second and seventh dorsal. They show a trace of lordosis usually, and appear to the finger to be a little broader, softer and more elastic than their fellows. The symptom is valuable only when these spinous processes are distinctly more sensitive to pressure than the others. The diagnosis of tuberculosis was confirmed by the tuberculin test in all but 2 out of 79 cases of this spinalgia, while none of them developed a spinal affection; 32 were children under 16, and 45 were adults. In only 14 were any signs of tuberculosis to be discovered in the lungs at the time. On the other hand, spinalgia was scarcely ever observed in advanced tuberculosis. Primary infection of the bronchial glands is a more dangerous lesion than when the glands in the neck are affected, although infection from the latter is liable to spread to the bronchial glands at puberty. Petruschky is an advocate of tuberculin treatment as the most rational and certain of all means of preventing general infection from glandular lesions.

69. **Tumors of Pancreas.**—Ehrlich illustrates a case of endothelioma and of sarcoma of the pancreas, both diagnosed as an ordinary cyst. He emphasizes that the most apparently

harmless cyst in the pancreas may prove to be a malignant tumor when there is no history of trauma to explain it, and exploratory puncture should therefore be systematically avoided on account of the danger of disseminating particles of malignant tissue. Both patients died, one in a few days and the other in less than four months. The first was a woman of 57 and the second a man of 66. Neither presented the appearance of malignant disease except that they were somewhat pale and thin.

70. **The Scopolamin-Morphin Narcosis.**—Schneiderlin was the first to systematically apply this method of narcosis, and he here relates his later experiences with it. The patient is in a tranquil, drowsy state and thus is obviated the psychic shock which is frequently an important factor in the by-effects of anesthesia. Another advantage is that the anesthetizer is dispensed with, while the method is free from danger if correctly done. The susceptibility of the patient is tested by a preliminary dose which causes some delay, and the respiration must be supervised for some time after the operation. These are the only drawbacks. His technic, except for emergency cases, is as follows: He tests the patient with a preliminary dose of first .8 to 1 mg. scopolamin (hyoscin) and then 2 cg. of morphin, usually on separate days. On the day of the operation he gives .8 to 1.25 mg. of the scopolamin and 2 to 3 cg. of morphin an hour and a half before commencing the operation. If, fifteen minutes before the operation, the narcosis is not sufficiently profound, he continues with .2 to .4 mg. of scopolamin and .5 to 1 cg. of morphin. Neither of the drugs alone produces insensibility, while the combination of the two at half the dose is followed by complete anesthesia. He gives a table of a number of cases in which extensive tests of the drugs were made with several days' interval at times between them so as to exclude the influence of after-effects. He also reports some emergency cases in which he operated at once. In one, for instance, he removed the glands in the axilla from a physician. At 12:30 he gave 1 mg. Sc. and 2 cg. Morph. At 1:45 he gave .8 mg. Sc. and 2 cg. Morph. At 2:15 the insensibility was complete and the operation was commenced. A similar operation on another patient was undertaken at 1:30 after an injection at 12 of 1 mg. Sc. and 3 cg. Morph. An abdominal hernia on a third patient was treated by radical operation commencing at 2 after giving at 12:30 an injection of 1 mg. Sc. and 4 cg. Morph., and at 1:45 another of .4 mg. Sc. and 1 cg. Morph. The patient must naturally be supervised afterward until return of consciousness, that asphyxia may not follow the falling back of the tongue or blood flowing into the throat. One of his patients was left alone, contrary to directions, after extraction of teeth, and the larynx became obstructed from hemorrhage, causing a condition of asphyxia requiring artificial respiration for several hours. When this method of narcosis has failed in the hands of the few others who have reported such an experience, the failure was due to the lack of preliminary testing, or too large doses were injected, or the stage of insensibility was not waited for. Fully an hour and a quarter to an hour and a half must elapse after the first injection before complete insensibility is attained and sometimes longer. It is tested by passing a needle through the lip or sticking it in the finger tip or region of the lower lid.

71. **Suture of Femoral Vein Near Poupart's Ligament.**—Schonwerth incised the femoral vein in operating on septic lesions in the inguinal region in 3 young soldiers. Instead of ligating the vein, he sutured it at once. Notwithstanding the suppuration in the glands, the lesions healed without evident thrombosis, edema or hemorrhage. He, therefore, recommends suture instead of ligature when the suppuration is of a more or less chronic character and restricted to the glands and their vicinity, as in his cases. The after-results are much better than when the task of establishing collateral circulation is imposed on the system.

73. **Treatment of Pneumonia with Cinnamic Acid.**—Krone was Landerer's assistant at one time, and regards the treatment of tuberculosis with cinnamic acid as a valuable progress. It induces a counter-irritation at the inflamed points, attracts leucocytes to the spot and conquers the primary inflammation, with a tendency to prevent general infection. By tests on himself he established the harmlessness of this medication to his complete satisfaction, and soon queried whether it were not possible to attain equally favorable results in fibrinous pneumonia. He has thus applied it in intravenous injections, strictly according to Landerer's technic, in 18 cases. In 14 the pneumonic inflammation reacted promptly to the injection, retrogressing rapidly and smoothly and in none of the cases was there general infection. In 2 of the 4 cases in which it failed to exert a favorable influence the patients were alcoholics, with degenerated hearts. He describes several cases in detail. Krone concludes that his unfailing success in the 14 uncomplicated cases indicates that cinnamic acid has an unmistakably favorable effect on fibrinous pneumonia if administered according to rule and in the early stages. It works against the inflammation in its early phases, reduces the fever, facilitates prompt and easy resolution and thus renders the breathing easier and quieter, while it prevents general infection.

78. **Movability of Grooved Liver.**—Penzoldt has had occasion to see four cases recently in which an apparently movable tumor proved to be a part of the liver separated by a deep groove from the rest, and so movable that it could easily be pushed up into the epigastrium. He thinks it probable that this condition is comparatively frequent, but has been mistakenly diagnosed. The patients complained of discomfort during stooping or working, and the groove was visible on the outer wall of the abdomen. He recommended them to suspend all their lower garments by buttoning them to a stout waist, made like a man's vest, broad on the shoulders and without any tightness around the waist. If the disturbances had been very severe he would have ordered a bandage around the trunk and, in extreme cases, anchored the movable lobe to the abdominal wall. He found that the movability and the disturbances became less as the women took on flesh, and he, therefore, advises fattening the patients as a systematic adjuvant in treatment.

80. **Aseptic and Bloodless Extirpation of Rectum.**—Wenzel describes Witzel's method of operating in case of carcinoma of the rectum, and states that he has not lost a single patient by sepsis or collapse and has had no recurrences. The indications for operation are given by the fascia recti propria. If the carcinoma has invaded this or passed beyond it, recurrence is almost inevitable, but if it is still limited by the fascia the intervention has every prospect of success. Resection of the rectum is almost certain to be followed by extension of the malignant disease from disseminated particles, and the only advantage is the retention of the natural anus. But as the anus has lost its nerve connections, it very rarely retains its functions and, consequently, any advantage from its retention is usually delusive, while those from extirpation of the rectum as a whole, with the carcinoma closely enclosed in it as in a tight bag, are so obvious and positive that there can be no comparison between the two methods. He prepares the patient for eight to ten days with light food, leaving little residue, fluids alone the last few days, with castor oil and high enemas daily until noon of the day before the operation, after which no fluids are introduced into the rectum. Fifteen drops of tct. op. spl. are given immediately after the last injection, again at evening, the next morning and again one hour before the intervention in a cup of equal parts of tea and brandy. The region is disinfected with a daily sitz soft-soap bath, with a full bath the day before and the day of the operation. The narcosis is according to his morphin and ether by the drop method. This allows an operation of several hours' duration. A soft catheter is inserted and left permanently in the bladder, and the anus is plugged with a small tampon coated with iodin and fastened with two tiers of silver wire sutures, the ends tied in a long loop, which proves a convenient handle later. The operation comprises, 1, extirpation of the coccyx and presacral detachment of the rectum; 2, mobilization of the rectal ampulla and opening of the peritoneum; 3, detaching the anal portion after ligature of the inferior hemorrhoidal artery; 4, ligature of the middle and superior hemorrhoidal arteries in the mesorectum and its

detachment up to the flexure, and 5, amputation of the rectum and making the gluteal anus. He describes in detail the reasons for further particulars of the technic. The deaths in the experience of other operators are due, in the majority of cases, to wound infection or to collapse from hemorrhage, both of which are entirely avoided by this method. The gluteal anus works so satisfactorily by its inherent elasticity and the anatomy of the parts that nearly all his patients have been able to resume their previous occupation.

81. **Operative Intervention in Carcinoma of Rectum.**—Witzel's first gluteal anus was made seventeen years ago, to remedy a stump too short to bring down to the natural anus. The nurse in attendance was overheard to murmur to herself: "He will be surprised to find it there," and Witzel states that he has been continually surprised since at the excellent functioning of the new anus. He calls it, by the way, gluteal proctostomosis. He has not lost one of the 17 patients operated on by his method from loss of blood or sepsis, and proclaims the principle: small carcinomas, extensive operations; large carcinomas, small operations; that is, merely palliative. He laments that digital examination of the rectum on complaints of "internal hemorrhoids" was neglected until too late for a carcinoma to be operable in 80 per cent. of all that applied to him. One special advantage of his method (see above) is that if the first steps of the operation show that the growth is inoperable or more accessible through a laparotomy, these indications can be complied with before injury has been inflicted on the patient. Among the various palliative operations he has tried he prefers subsartorial colostomosis, that is, he reaches the flexure through an incision above Poupart's ligament, close to the iliac crest. The flexure is drawn out through the aperture under Poupart's ligament and under the sartorius muscle, fastened to the peritoneum and to the skin and then opened after the abdominal incision has been sutured. Still another method is to make an oblique fistula similar to his stomach fistulas which close spontaneously in a few days after the tube is removed.

86. **Symptomatology of Carcinoma of Prostate.**—Doerfler reports a case which demonstrates that a carcinoma developing in the prostate, of such extent that it grows up to the orifice of one of the ureters and breaks through into the bladder, may run its course without inducing any local symptoms, especially any disturbances in urination. The rather frequent micturition observed for a year, but without any symptoms, could scarcely be regarded as pathologic, and could readily be explained by slight hypertrophy of the prostate. The case also demonstrates that a carcinoma in the prostate may cause inflammation of both Poupart's ligaments and extend to the adjacent peritoneum, simulating a periappendicular inflammation with exudate. Evidently these inflammations were transmitted by way of the involved ureter. Differentiating points are the closer vicinity of such exudates to the ureter, possibly also the lesser participation of the general health and of the intestines in the local manifestations. The later course of the malignant disease in this case was completely dominated by the symptoms of an intermittent pyelitis, intermittent accumulations of urine in the renal pelvis. An important point for the etiology of such an intermittent hydronephrosis was the fact noted that the urine collected when the patient stood and vanished on reclining. The tumor in the prostate probably pressed on the ureter when in the erect position while it sank away in the dorsal decubitus. Death was due in this case to total anuria a few days after operation, which indicates that the chronic congestion in the ureter and renal pelvis had impaired the vitality of the kidney.

Therapie der Gegenwart, Berlin.

Last indexed, p. 681.

89 (March.) *Ueber eine neue Klasse von Schlafmitteln (hypnotics). E. Fischer and J. von Mering.
90 *Ueber die Behandlung von Leber (liver) Affectionen mit Quecksilber, nebst Bemerkungen über fieberhafte Leberaffectionen (febrile liver affections) und den etiologischen Schluss (conclusion) ex juvantibus. O. Rosenbach.
91 *Die Behandlung der Perityphlitis. Ch. Bäumler.
92 Bemerkungen über den Werth des Theocin. H. Schlesinger.
93 Klinische Erfahrungen (experiences) über Rhizoma scopoliæ carniolivæ. L. v. Ketly.
94 Gelatine, ihre Gefahren und ihr Werth (its dangers and value) in der Therapie. H. Doerfler. Critical Review.
95 Zur Kenntniss der Borsäurewirkung (effect of boric acid). M. Cloetta.
96 Statistische Beitrag zur Wirksamkeit des Heilserums bei Diphtherie. G. Bundt.
97 Ueber Ichthalbin. J. Marcuse.
98 Beiträge zur Wirkung der Moorbäder and Moorumschläge (peat baths and packs) bei Exsudat-Resten nach (relics after) Perityphlitis. F. Straschnow.
99 *Gleichzeitige Gewinnung mehrerer Actinogramme (manifolding radiographs). Schuppenhauer.
100 *Zur Heilbarkeit (curability) der Tuberculose. Meissen.

89. **New Class of Hypnotics.**—The researches of Fischer and Mering establish an intimate relation between the chemical structure and the hypnotic action of drugs. The urea group is requisite but does not suffice alone. It must be in combination with some alkyl containing carbon. The nature of the alkyl is also important. Out of the entire group answering to these conditions the chemical most powerful in its hypnotic effect while most suited for therapeutic purposes, is diethyl-malonyl-urea, which in the intensity of its action surpasses all other hypnotics hitherto known. It has a slightly bitter taste; is readily soluble and in numerous tests on dogs and in the clinic proved remarkably effective in the therapeutic dose which has been established to be .3 to .5 gm. for insomnia and 1 g. in agrypnia and extreme agitation. For convenience its long name is to be supplanted by "veronal."

90. **Mercury in Liver Affections.**—Klemperer has established by the two cases he published in the January number that severe liver affections may be cured by subcutaneous injection of mercury. The effect was so striking that he assumed that the lesions in the liver must have been syphilitic, but Rosenbach protests against ascribing to syphilis every lesion cured by mercury. Their occurrence in a syphilitic is a casual coincidence in many instances. Mercury is not specific against any special virus or microbe, he asserts, but is specific in the sense that it is the means of maximal stimulation or inhibition of abnormal functioning of the liver. By subcutaneous administration we avoid the deleterious action on the intestines. Too strong intestinal reaction interferes with the effect of mercury on the liver. In future he urges that all cases of acute or subacute liver affections should be treated with mercury as soon as possible, in doses too small to be laxative, or by subcutaneous injection. Considerable or continuous fever speaks against lues.

91. **Medical Treatment of Appendicitis.**—Bäumler has treated medically 187 patients with appendicitis in the last twenty-five years; 124 were men and 63 women. The recoveries were 93.6 per cent. of the men and 90.5 per cent. of the women. The severity of some of the cases can be deduced from the fact that 9 per cent. of the men and 15 per cent. of the women were compelled to remain in the hospital (Freiburg), from 60 to 200 days. He concludes from his experience that a small proportion are doomed unless promptly operated on, but recovery is possible without surgical intervention in the overwhelming majority, even in cases of large pus collections as they may empty themselves spontaneously into the intestine, bladder or vagina and if small may be absorbed. If, after complete subsidence of the attack, local phenomena still are noted, even if only occasionally, the appendix must be removed.

99. **Manifolding Radiographs Without Plates.**—THE JOURNAL has mentioned a recent suggestion that it is possible to dispense with the plate in radiographing and make the exposure directly on the photographic paper. Schuppenhauer has found that two to four thicknesses of the paper can be used and several radiographs taken at once.

100. **Curability of Tuberculosis.**—Out of the 1,731 tuberculous subjects received at the Hohenhonnef sanatorium in Germany, 208 have been cured for three to eleven years. Of the 278 dismissed as cured, 248 have been followed. Only 40 have grown worse again, and in nearly every instance this could be directly traced to the stress of poverty or overwork. All the others are permanently well. They belong to all classes of society; some of the women have married and borne children. Some have been accepted by the life insurance companies as ordinary risks.

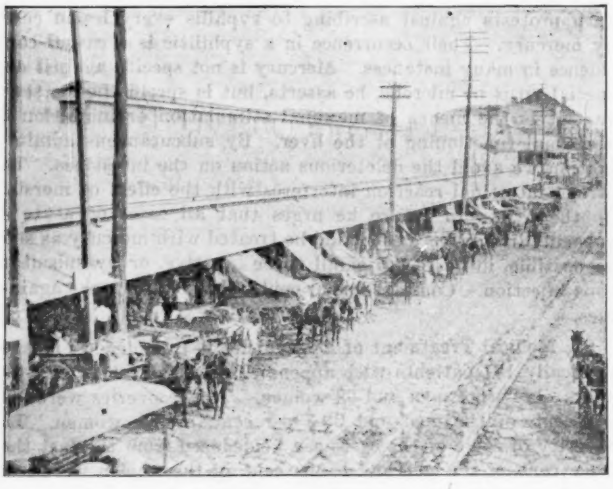
THE NEW ORLEANS SESSION

Description of the Crescent City and Its Environs, Points of Interest and Details of the Preparations for the Fifty-fourth Annual Session of the American Medical Association, May 5 to 8, 1903

NEW ORLEANS.

"Rede the rede of this old roof tree;
Here be trust fast, opinion free,
Knightly right hand and Christian knee;
Worth in all, wit in some,
Laughter open, slander dumb;
Hearth where rooted friendships grow,
Safe as altar, even to foe."

The Crescent City bends and turns with facile form to meet and follow the Father of Waters as it runs in each direction of the compass as it surrounds, almost, the metropolis of the south. We might, in the same breath,



French Market.

say cosmopolis of America, for in its many variants New Orleans bears the earmarks of a foreign people, while in its modern trends it voices the note which the whole United States is to-day sounding for progress. In many ways New Orleans deserves the commentary that she is fifty years behind the times—the truth is one of which many of the multityped population are proud.

How can one best know New Orleans? Baedeker takes a foreign city and classifies it into hotels, restaurants, museums, picture galleries, principal streets, shopping places and suburbs, and after that one changes cars for another burg. Above all New Orleans is different. It is in this that the local color has grown into almost fame. One can not see New Orleans between trains nor over night without having a certain indigestion afterwards. It needs more than just a guide book, too, and as yet the ubiquitous cicerone is a rara avis in the Crescent City. This is hardly the place to make full description, but the intending visitor should get a mind's picture of what is before him—the medical man especially, as he deals so much in analysis and the speculative.

Let us be like the guide book for a moment, to digress as we make the reader interested; and we may not forget that we are writing to advise members of the American Medical Association who are coming to New Orleans.

ARRIVAL IN NEW ORLEANS.

The first thing to do is to find lodgment. If you have reserved accommodations through the Arrangements Committee or not, you should, on arrival, go to the Bureau of Information, at the Washington Artillery

The Levee.

Hall, and there find your location at hotel or boarding house. If you have already received explicit notification of your location, go at once to the address sent you. The Committee on Hotels and Boarding Houses, together with the Information Bureau, will have systematic arrangements for the disposition of all comers, and the bureau will be open from 8 o'clock a. m., Monday, May 4, to the end of the session. It will help the committee if each member will write in advance, stating the number of persons in the party, men, women and children.

The immense crowds at the 1903 carnival were excellently disposed of, and we hope to do better by the American Medical Association.

HOTELS AND BOARDING HOUSES.

Hotel rates have been considered, on both the European and American plans. With boarding houses, it is far better to arrange for bed and breakfast and to lunch at the Artillery Hall, where lunch will be daily provided. Dinner at the famous restaurants of New

Orleans should, by all means, be considered. Many of the boarding houses on the list of the committee will only have rooms without meals, so, in writing,* specific advice should be given if meals and bath are desired with rooms. Remember that the hotels can not accommodate all Association members and their families and outside quarters must be depended on.

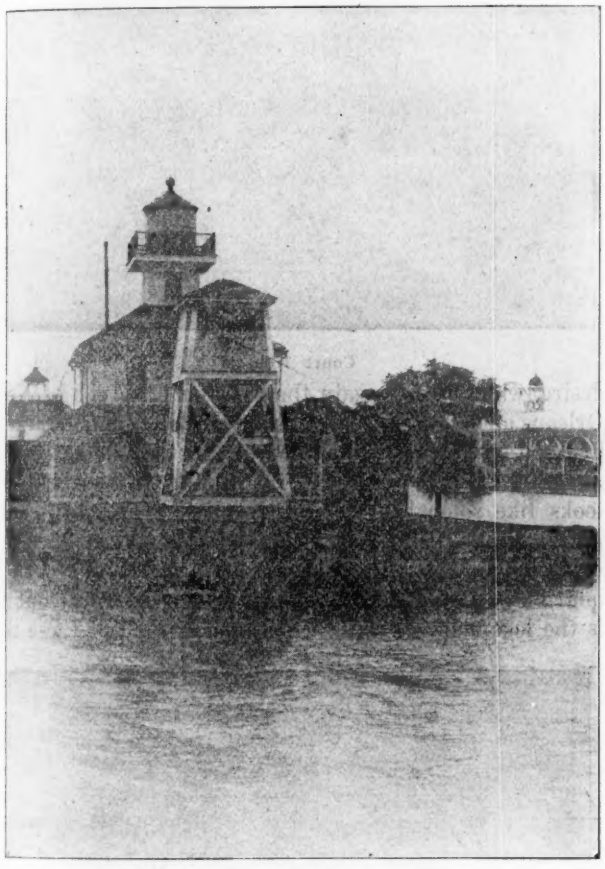
The following hotels have rates of $1.50 and up:

New St. Charles Hotel—Between Common and Gravier streets on St. Charles street. Headquarters of the Association. (See illustration under Association News.)

Cosmopolitan Hotel—Bourbon street, between Canal street and Customhouse street. European plan.

Commercial Hotel—Corner Royal and Customhouse streets. European plan.

Grunewald Hotel—Baronne street, between Canal and Common streets. European and American plan.



Light House at West End.

St. Charles Mansion—826 St. Charles street. European and American plan.

Denechaud Hotel—Corner Carondelet and Perdido streets. European and American plan.

The following hotels have rates of $1 and up:

Fabacher's Hotel—Royal and Customhouse streets. European plan.

Louisiana Restaurant and Hotel—Customhouse street, between Royal and Bourbon streets. European plan. A few rooms only.

Antoine's Restaurant and Hotel—713 St. Louis street, between Royal and Bourbon streets. European plan. A few rooms only.

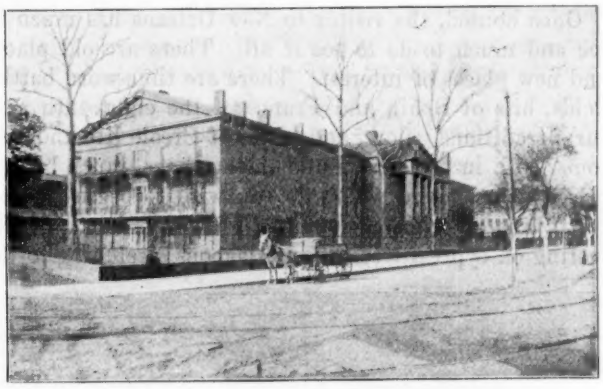
Park View House—616 Camp street (Lafayette square).

Osborne Hotel—Carondelet and Poydras streets.

Christian Women's Exchange (ladies only)—Camp street (Lafayette square). Rooms and meals.

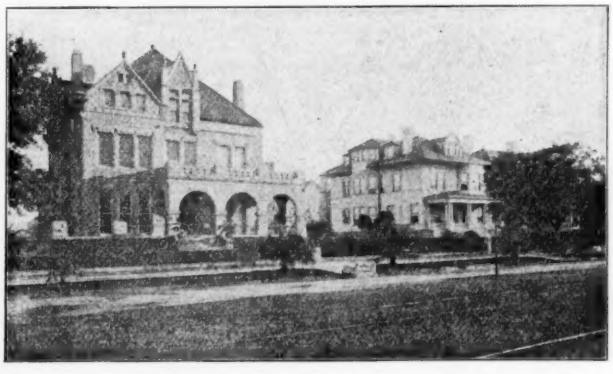
Hotel Bero—226 Bourbon street.

The rates at boarding houses will be $1 to $2 a day, per person, for rooms only.



United States Mint.

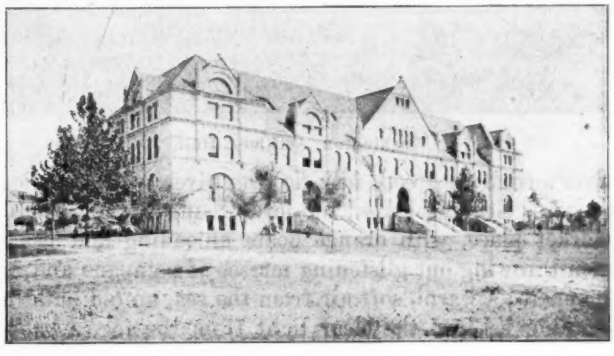
In taking apartments at hotels or boarding houses, state in advance who you are, member of American Medical Association, and arrange rates. This saves trouble. If any discrepancy arises, report the matter



Residences on St. Charles Avenue.

to the Bureau of Information promptly and they will take the matter up for you.

All hotels are convenient to one another and, while the headquarters of the meeting will be at the New St.



Tulane University.

Charles Hotel, the Sections are as near one hotel as another.

The center of all meetings will be at the Washington Artillery Hall, on St. Charles street, seven blocks from Canal street, the main thoroughfare. The Postoffice,

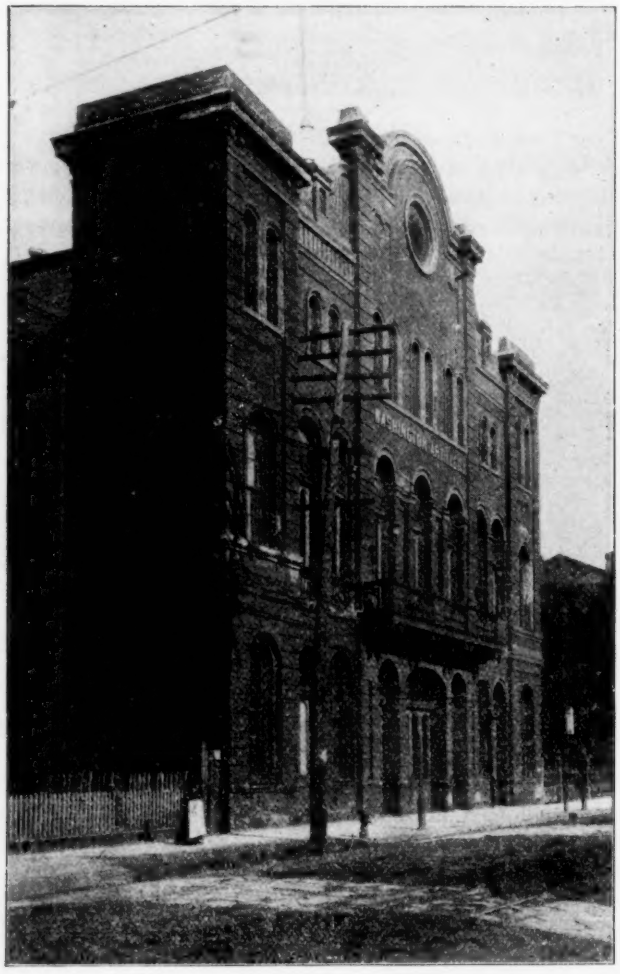
* Write to Dr. E. D. Martin, care Crescent Information Bureau, 810 Common Street, New Orleans.

Registration Bureau, Bureau of Information, General Exhibit, Scientific Exhibit, and several General Sections will be found here. A complete list of Sections and their places of meeting will be found below.

THE FRENCH MARKET.

Once housed, the visitor to New Orleans has much to see and much to do to see it all. There are old places and new places of interest. There are time-worn battlefields, bits of Spain and France of the eighteenth century, traditions galore, and tastes of Creole life and customs, both in the streets and in the shops, much behind closed doors. And where do you wish to begin?

"A line of crimson, low in a gray sky, a ball of fire resting on cypress trees. Long lagoons stretching to the



Washington Artillery Hall.

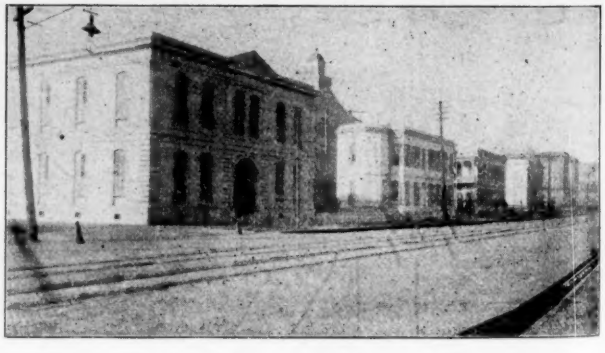
river's edge; a green, idly flowing river, with its silent cargo of sleeping ships; the levee rising against the old market place, with orange boats unloading and fishermen throwing out glistening masses of pompano and red snappers; a warm, soft air from the sea, an old building looming up into the clear light from the fog, a babble of voices, and odor of many things"—so writes a press visitor of the French Market, "the most characteristic and interesting thing to see in this queer town, built in a crescent around a masterful green river."

It is a good place to begin, for here is cosmopolis itself. The butcher may cry his trade with teutonic accent, while his neighbor truckles to his patronage in gascon French; across the road, the gentler Creole accent sweetly persuades the purchaser of excellence in wares, while yet again, not a voice's length away, Italian, Sicilian, Indian, Mexican and Cajan (Acadian) tones are heard.

A stranger in the old French Market looks askance at the coffee stands, with their primitive service, but the cleanliness, first, and the appetizing odor of the fresh crullers and French *café au lait* soon make the

Court House.

desire, which comes again the next visit. Much of New Orleans and its traditions center near the French Market, Jackson square, the old cathedral and Cabildo and, on a moonlight night, which we find in May, this *vieux carré* looks like some bit of old Provence, or Tours, transported, with all its Balzacian coloring, to act as the focus for a new Latinity in a newer world. The French quarter of New Orleans has its own traditions, but it is the legendary coloring which makes each of these the



Charity Hospital.

more *genre*. Even to-day the moss-grown courtyards harbor love cotes and, in the same old way, Cupid sends the sparrows by day and the mocking bird by night. But the ghosts of Mme. Delphine, of the Royal street haunted house, of Pere Antoine, all seem to shadow modern innovations as if the city there, at least, were part of an *ancient régime*.

The doorway of some breaking house-front tells of former splendor, in every line telling of the ancestral well-being and, perhaps, opulence. The romances lie

beyond the door, and we find them now and then; amidst poverty there rests an heirloom in some bit of ivory, carved many decades since; a bit of brass, bearing noble arms; a portrait worthy Cousin Pons' collection, a dash of color on a whitewashed wall. The casual visitor does not see all these things, but to one who loves the air, the spirit hovers everywhere in the *vieux carré.*

The very streets in the old quarter are full of the spirit of things. By night the dulcet chime of the old St. Louis cathedral times the echoing footstep of the late pedestrian, who half stops in the shadowing light, as if the very walls should render up some vibrant soul among the old traditions, as the note of some old violin is roused from a buried past by a sympathetic harmony of some companion note, which passes as it sounds.

By day the balconies bear witness to a foreign land, and beneath them old-fashioned shops invite the passer-by. In Chartres street, hard by, are the stores with birds and beasts and curios of mongrel source. In Royal and Bourbon streets are shops of antiques, of books, of masks and costumes for the carnival—

"Satans and saints and painted clowns
Meet and smile in the motley throng;
And nuns and friars in sober gowns
Lift their chants with a siren's song;
For all the world is akin, and laid
Under the spell of the masquerade."

There are historic points of interest in the old quarter and of a sort to demand some pause. The guide books must tell the detail, but the suggestion may find place here.

The Place d'Armes, now Jackson square, is the point of history for those interested, for it was in one of the old buildings nearby that the Louisiana purchase was ratified. In early times there were no handsome edifices, but a simple church, on the site of the present cathedral —in which to-day rest the remains of the early priest fathers, as well as those of Don Almonester de Roxas, the founder of charities, hospitals and leprosarium. Across the alleyways, on either side, stand the Cabildo and ancient court buildings—to-day sadly in need of care and repair.

Canal Street.

Not far down on Royal street, which passes by the old cathedral garden, the iron fret spells the name of the "St. Louis Hotel," latterly the Hotel Royal, for many years a famous hostelry; once the state capitol building, and before the war the place where slaves were sold.

At Royal and St Peter the pink house, that of "'Sieur George," "with its stucco peeling off in broad patches, has a solemn look of gentility in rags, and stands, or, as it were, hangs about the corner of two streets, like a faded fop who pretends to be looking for employment."*

* George W. Cable's "Old Creole Days."

At Hospital and Royal streets stands the "Haunted House," which by night seems to show its ghostly character; shunned by passersby as if still the shrieks and chains might be heard, or the swish, swish of silken garments speeding through the solitary street.

In the neighborhood are the house of "Mme. Delphine," the United States mint, the archbishop's palace, the famous French Opera, and the Absinthe House, which for many years served as the afternoon and evening club for the professional men of the city, and even to-day preserves its architectural and other pristine qualities.

THE RIVER AND SHIPPING.

Canal street is one of the avenues of the world; broad, with central paved portion for cars, not obstructing traffic, it presents a fine appearance.

The beginning of Canal street at the river presents a fair idea of the local river business; the shouts of the

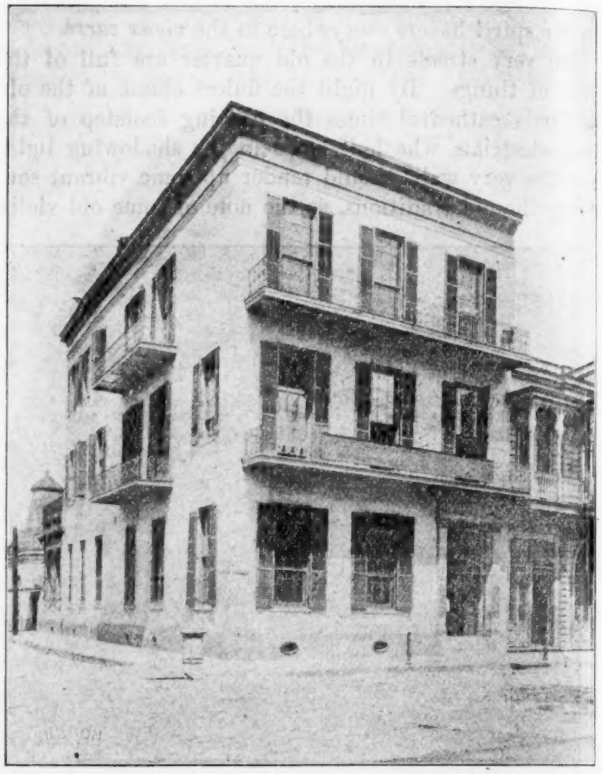
Haunted House.

ship's mate, whose invectives are often far more forceful than polite; the running roustabouts, the hurly burly of a varying crowd; the note of a shrill whistle, or some siren sounding down the stream; the gong of the ferry, and the sights of a levee covered with all sorts of things from barrels to bales and from boxes to huge hogsheads.

On the ferry in midstream an excellent view of the foreign shipping may be had: A long line of slanting levees, here and there broken by the expanse of some ocean liner, trimmed in red, or gray, or yellow, with smaller vessels of coastwise proportions between, the snorting of some egoistic steam tug, pushing or dragging some belated burden into port.

Across the stream, with a background of green cypress, two of New Orleans districts, Algiers and Gretna, lie; the former made prosperous by the Southern Pacific railroad and remaining so on its merits; the other half sleepy in its primitiveness, but kept awake by a mill or two puffing away day and night.

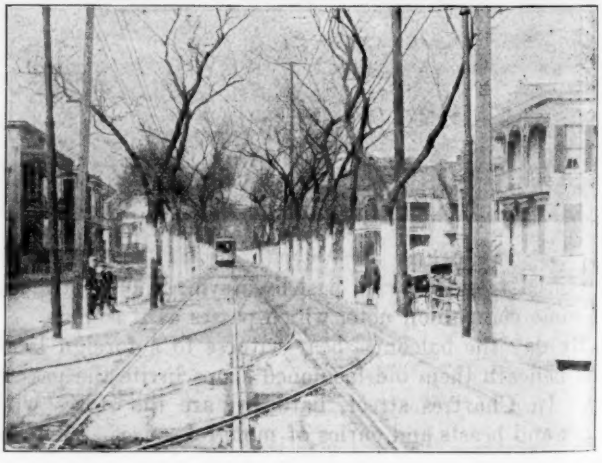
Yonder building, tall, on the right as your ferry comes in again, is the sugar refinery, which must be seen from the river on a foggy night to remark its



Eye, Ear, Nose and Throat Hospital.

myriad star-like windows sparkling out in the quiet darkness.

The Louisville and Nashville depot, the Fourteenth of September monument, the customhouse, a row of wholesale houses and retail stores, the Boston Club, the Chess Club, the Grand Opera House, the shopping dis-

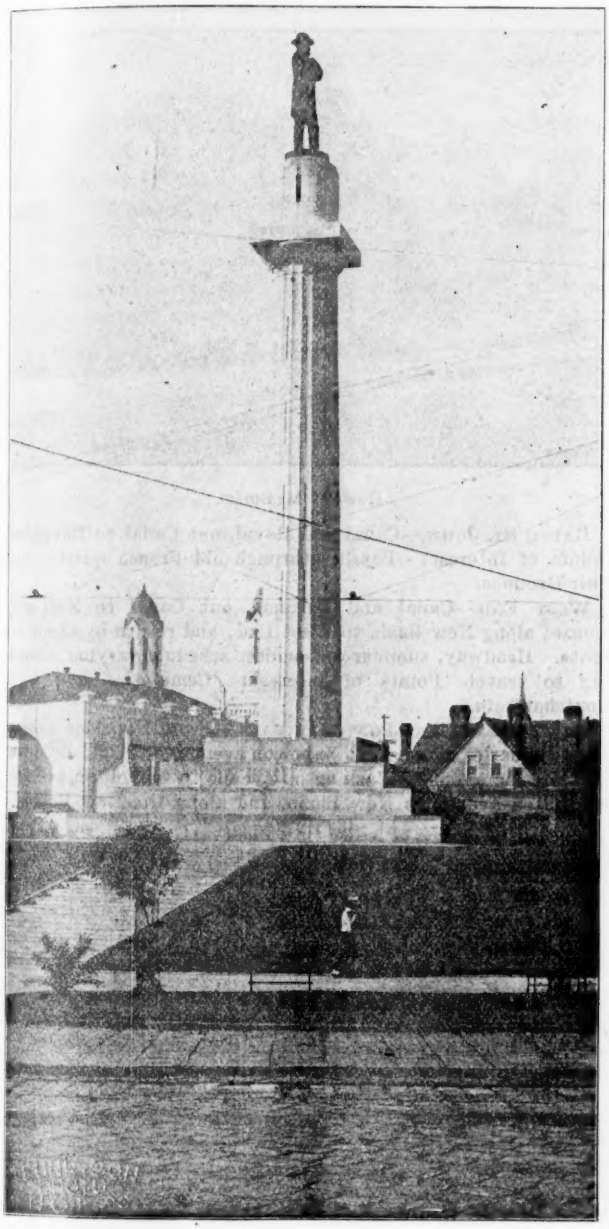


Esplanade Street.

trict, the Pickwick Club, old Rampart street, Elk place, the court house, and, straight out Canal street all the way to the beautiful cemeteries, this broad highway runs, passing the Tulane Medical College, Claiborne avenue, the Straight University (colored), a lot of middle-class

homes, until the bayou is reached, the Half Way House and the homes of the dead. Just a bit away is the famous City Park and duelling grounds, and straight on the same electric road lies West End, the breathing spot of the city during the summer months.

This is reached through a picturesque ride past a bit of Louisiana swamp, in which the iris blooms with the dogwood, and where honeysuckle and magnolia flower together. The palms are thick among the moss-covered



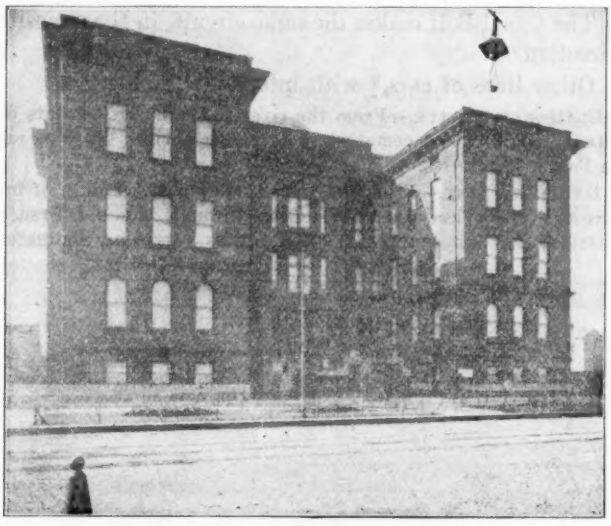
Lee Circle.

trees, and the far note of the wandering crane is sometimes heard.

THE CAR LINES.

Back to Canal street again, one must be struck with the multitude of cars and the ringing of gongs. All cars center in Canal street, and the destination of each and every one is plainly marked. These are the pleasure wagons of New Orleans, and any one of the several lines will show a new part of the Crescent City.

Tulane Belt leaves Canal at Rampart, turns out Tulane avenue, passing by the court house, the New Orleans Polyclinic, and the world-famous Charity Hospital, and the Milliken Memorial Hospital for children, on and out by the baseball park and Athletic Park Casino, where, in summer, comic opera holds the boards. You round a curve and then are in Carrolton avenue for a



Richard Milliken Memorial Hospital for Children.

long and pleasant suburban spin. Then you enter the farthest extreme of St. Charles avenue, having, by a series of curves, turned until you are headed in the direction of Canal street again. This is the main uptown fashionable thoroughfare, and along it you will see every variety of southern home. You pass by Tulane University and Audubon Park, the Harmony Club, the Atheneum, Lee Circle, Howard Library, and, reaching

Audubon Park.

Canal again, have traveled a distance of about eleven miles.

St. Charles Belt covers the same ground, only moving in the opposite direction, starting from Canal and Baronne streets.

Esplanade Belt, car going away from the river, goes down Rampart street, past the Ear, Nose and Throat

Hospital, and down a double track for a distance of over a mile is a grove of trees, old as the lordly mansions lining the street on either side. This is the downtown fashionable thoroughfare, and presents the residences of the Creole families; notable in these is the home of the present mayor. Past the Jockey Club the car goes, along Bayou St. John, by the City Park, and into Canal street again and to the point of starting.

The Canal Belt makes the same circuit, in the opposite direction.

Other lines of cars,* with interesting sights, are:

CLAIBORNE AVENUE.—From the river to Claiborne. Points of interest: St. Louis cemeteries; St. Roch shrine; St. Vincent de Paul's cemeteries.

DAUPHINE LINE.—From the river to Rampart. Points of interest: Postoffice, Custom House; through the old French quarter; Usuline convent; United States garrison; Slaughter

Cotton Exchange.

House. (This car takes you within a short walk of the Chalmette Cemetery.)

LEVEE AND BARRACKS.—Canal and Camp to North Peters. Points of interest: Postoffice and Custom House; St. Louis Cathedral; the Cabildo; the famous old French market; full view of river front; Northeastern dépot; transfers to Dauphine car at Poland, which takes you to barracks, Chalmette cemetery and Slaughter House. Also passes Jackson square and United States Mint.

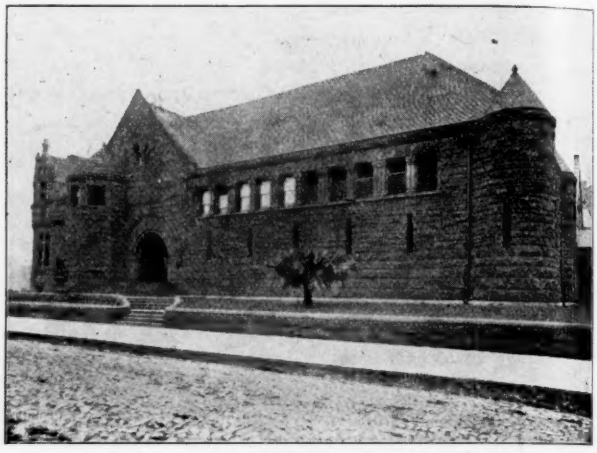
PRYTANIA.—Canal and Basin to Camp. Points of interest: Margaret's monument; through resident section of the city and to Audubon Park; Howard Memorial, Howard's Library, Fisk Library, St. Patrick's Church.

MAGAZINE LINE.—From Basin and Canal out Canal to Camp, up Camp to Audubon Park. Points of interest: Boston and Pickwick clubs; through business section; Lafayette square; Fisk Free and Public Library; Margaret's Monument; Coliseum Square; St. Patrick's Church; Howard Library; Howard's Memorial; Audubon Park.

VILLERE.—From head of river, out Canal to Villere. Points of interest: Direct line to St. Roch's shrine.

TCHOUPITOULAS.—From Canal and Decatur up Tchoupitoulas to Audubon Park. Points of interest: Full view of river front; and along cotton presses; U. S. Marine Hospital; Audubon Park; also Stuyvesant docks and grain elevators.

ERATO.—Carondelet and Canal. Points of interest: New Orleans Cotton Exchange; Margaret's Monument; Annunciation and Clay Squares; Lafayette Square; City Hall; Orpheum and Audubon theaters; St. Charles Hotel; Masonic Temple.



Howard Memorial.

BAYOU ST. JOHN.—Canal and Royal, out Canal to Dauphine. Points of Interest: Passing through old French quarter and Fair Grounds.

WEST END.—Canal and Baronne, out Canal to Half-way House; along New Basin to West End; and return by the same route. Headway, summer and winter schedule varying according to travel. Points of interest: Cemeteries and Lake Pontchartrain.

NEW ORLEANS AND PONTCHARTRAIN.—From Napoleon avenue and St. Charles avenue, out Napoleon avenue to Broad; Broad to Washington avenue; Washington avenue to Carrollton avenue; Carrollton avenue to New Basin, and along the New Basin to

New Orleans Polyclinic.

the Half-way House. Returning by the same route. Points of interest: Ride through the suburbs; direct line to cemeteries.

THE RESTAURANTS.

Near Canal street and in the heart of the city is a number of points of interest to be mentioned. The famous Sazerac saloon, where cocktails are brewed, the cuisines of Lamothe's (St. Charles street near Common), of the Gem, and the Cosmopolitan restaurants on Royal and Bourbon streets are to be mentioned.

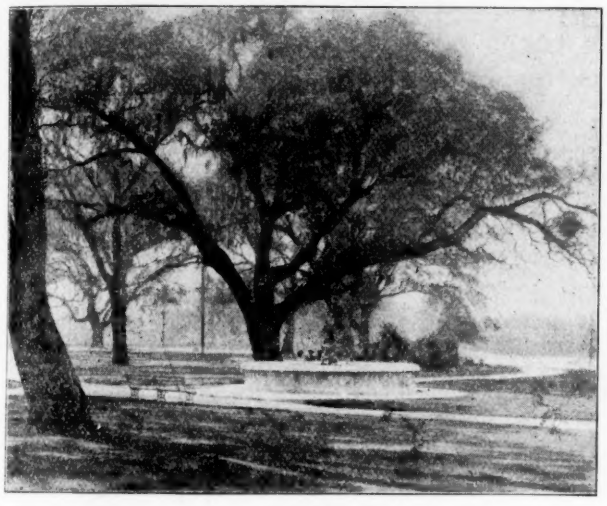
Around the corner on Custom-house, between Royal and Bourbon, the Restaurant de La Louisiane modestly

* We are indebted to the Feb. 24, 1903, edition of the N. O. Harlequin for this street car guide.

await you. On Bourbon street Victor affably bids you be seated and invites you to cultivate the gout he shuffles for you. The Absinthe room is just a block away at Bienville street, and it is worth while to try the poison as it is concocted by Felix.

Down by the French Opera, not far away, is Antoine's. When Jules tucks the corner of his immaculate apron in his girdle and pretends to wipe his unsoiled hand, just from his kitchen, to greet his friends' guests, he only shadows the interpretation of a gastronomic genius. There are many things at Antoine's—rather at Jules Alciatore's—to tempt Epicurean taste. Will you try a bit of cuttle fish, or a soft-shelled shrimp, a sliver of true Strasburg pâtè, a *bouillabaisse a la maitre d'hotel,* some eggs *matalengua,* a fillet in a casserole, or a chicken trussed and cooked past recognition? Jules knows how it is done. Modest withal, but sure in that art and skill which is as much deserving as the touch of a music stroke, or a tint in flesh tones on a vacant canvas.

Above Canal street, the Cotton Exchange, Board of Trade, and the theaters, five in all and in the season, prosperous enough. But sights are not hard to find.



City Park.

MEDICAL INSTITUTIONS IN NEW ORLEANS.

One always thinks of the Charity Hospital first, and really this is just, for from this old institution have arisen all of the younger hospitals and educational institutions of to-day.

In 1737 Jean Louis, sailor, bequeathed about 12,000 livres to found a hospital ("Hospice des Pauvres"), and this was the beginning of the Charity Hospital.* Subsequently Don Andres de Almonester rebuilt it, and it was subsequently destroyed in 1779. Almonester again rebuilt the hospital, the "New Charity Hospital of St. Charles," completing it in 1784, "a commodious, substantial edifice, built of brick and mortar, surrounded by suitable dependencies and provided with a chapel."

On Sept. 23, 1809, the Charity Hospital of Almonester was burned to the ground. The patients were temporarily quartered in the City Hall, afterward being removed to a country plantation, where they all but died of neglect and starvation. After a varied and tragic career, having been conceived in many sites, the New Orleans Charity Hospital arose on its present site in 1815. From that time the institution has grown in size and importance, until to-day it covers acres of ground, accommodates nearly 1,200 patients and provides facilities for the students of Tulane and of the New Orleans Polyclinic. In 1895 a new amphitheater was completed, modern in its equipment and more recently have been added a complete nurses' home and a hospital for babies and children.

The system of administration consists in a board of administrators, with a vice-president at the head (the governor of the state being the nominal president of the board). The members of this board are appointed by the governor, and have successive terms. The domestic management is in the hands of the Sisters of Charity, while the medical and surgical control is under a resident surgeon and two assistants, the interne and externe services being still further administered by a staff of undergraduates selected by competitive examination from the third-year class of Tulane.

The visiting staff have supervision of the wards and

St. Louis Cemetery.

have control of the out-door clinics, both of which are used for teaching purposes by the Polyclinic and Tulane, under provisions expressly enacted by the state legislature. Besides the Charity Hospital, the Eye, Ear, Nose and Throat Hospital and the New Orleans Polyclinic conduct free out-door clinics for the poor only; the Touro Infirmary also conducts a clinic and hospital, at which those are treated gratis who can not pay.

The Eye, Ear, Nose and Throat Hospital came into existence in 1887 as a necessitous institution for this class of patients, hitherto treated perfunctorily in a limited way at the Charity Hospital. The whole success of the institution is due to one man, Dr. A. W. de Roaldes, who has devoted himself to developing what is the best special hospital of its kind in the South.

The New Orleans Polyclinic arose contemporaneously with this hospital, originally devised to provide a post-graduate institution for upper-class students and doctors. Now in its sixteenth year, with a faculty of seventeen professors and some thirty lecturers and assistants, the Polyclinic owns a handsome building of its own and

* The early Charity Hospital, Dr. J. J. Castellanos, N. O. Med. and Surg. Journal, July, 1897.

draws a large class from the south and southwest annually. Afternoon free clinics are held in all departments.

The Touro Infirmary is a sectarian institution, doing considerable charity aside from its conduct as a private hospital. Afternoon clinics are held in all departments.

The New Orleans Sanitarium and Training School for Nurses, now erecting a new and handsome additional building, originated as a training school for nurses in 1889, the first in New Orleans and in the south. It still holds its position among the best training schools in the country while the sanitarium feature has outgrown the space and accommodations. The unsectarian character probably adds to its popularity.

The Hotel Dieu is a private hospital, owned and managed by the Sisters of Charity. The building is imposing and the institution is now very old and well known.

Tulane Medical College, or the Medical Department of Tulane University, has its building on Canal street, and is admirably equipped for its purposes. This department usually numbers about 400 students, chiefly from the south and southwest. The school is old and too well known to need detailed remarks. The building is known as the "Richardson Memorial," indicating the fact that it was built and donated by the widow of Dr. T. G. Richardson, at one time dean of the school and prominently connected with medical progress in the community.

The Orleans Parish Medical Society modestly holds out at 163 University Place. The rooms of the society are by no means indicative of the work accomplished by this body, which numbers about 200 members. Meetings are held twice a month and are usually full of interest.

The *New Orleans Medical and Surgical Journal* has its office at the Polyclinic. It was established in 1844 and is the fourth oldest medical journal in the United States. It is the official organ of the Orleans Parish Medical Society and the Louisiana State Medical Society.

PLACES TO FIND SOMETHING TO EAT.

Antoine's, 713 St. Louis street.
Begue's, Madison and Decatur.
Mayer's, Jackson Square.
Louisiana Restaurant, Custom House street.
Victor's, Bourbon street.
Cosmopolitan Restaurant, Bourbon or Royal, near Canal.
Lamothe's, St. Charles street, near Common.
Lopez's, Canal street.
Pizzini's, Canal street.
Domecq's, Canal street.
Janssen's, Canal street.
Brasco's, Gravier street, near Carondelet.
Vonderbanck's, Common street, near St. Charles.
Fabacher's, Royal and Custom House.
West End Hotel, West End.
Renaissance des Chenes Verts, at City Park.
Hotel Denechaud, Carondelet and Perdido.
Hotel Grunewald, Baronne, near Canal.
Commander's, Washington and Chestnut streets.
And a number of small restaurants on St. Charles avenue.

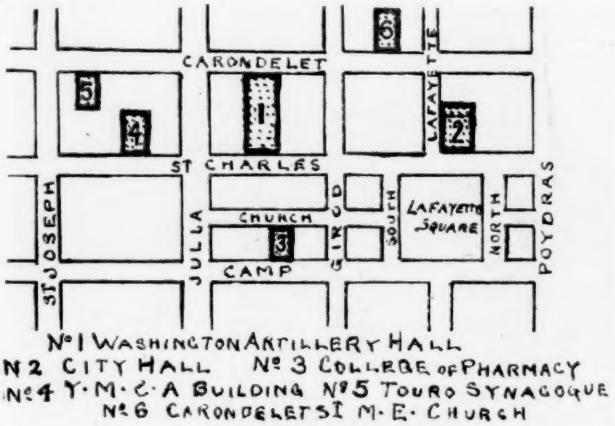
DISTRIBUTION OF SECTIONS.

1. Practice of Medicine, Washington Artillery Hall, second floor.
2 Pathology and Physiology, Washington Artillery Hall, first floor.
3. Ophthalmology, College of Pharmacy.
4. Laryngology and Otology, College of Pharmacy.
5. Surgery and Anatomy, Young Men's Christian Association, Auditorium.
6. Diseases of Children, Young Men's Christian Association.
7. Cutaneous Medicine and Surgery, Young Men's Christian Association.
8. Obstetrics and Gynecology, Touro Synagogue.
9. Nervous and Mental Diseases, Touro Synagogue.
10. Stomatology, Carondelet Street Methodist-Episcopal Church.
11. Hygiene and Sanitary Science, Carondelet Street Methodist Church
12. Materia Medica, Pharmacy and Therapeutics, Carondelet Street Methodist-Episcopal Church.

HOUSE OF DELEGATES, Council Chamber, City Hall.
GENERAL SESSIONS, Tulane Theater.

The Washington Artillery Hall, the main building for the exhibits, postoffice, etc., was originally erected as an exposition building, and has been used for such purposes ever since. Conventions of all sorts are held here and the commodious rooms are excellently adapted. It is central and convenient to a number of car lines.

Arrangements have been made for five daily mails at the postoffice, and a news stand and telegraph and telephone station will be found there.



Location of Meeting Places.

POINTS OF INTEREST NEAR NEW ORLEANS.

The immediate suburbs of New Orleans are West End, Spanish Fort and Milneburg; West End we have already referred to. The restaurant here is one of the best in New Orleans and a delightful place to breakfast. Spanish Fort and Milneburg used to be famous resorts, but have of late years dropped into mediocrity.

Lake resorts are Covington and Mandeville, reached in a couple of hours by boat or rail.

The Louisville & Nashville runs along Mississippi Sound and touches the summer homes of the New Orleans and Mobile people. Some of these are only fishing resorts while others are well inhabited, places like Biloxi, Bay St. Louis, Mississippi City, Pass Christian and Ocean Springs being of considerable size and afforded modern convenience in the way of electric lighting and modern home facilities.

Over the Southern Pacific one quickly reaches the sugar-cane and rice countries, and in St. Mary's Parish and in the Lafourche district find the great Teche country, made classic in the beautiful references in Longfellow's Evangeline:

"Slowly they entered the Teche, where it flows through the green Opelousas."

Regular river boats make this trip in the season and the overhanging Spanish moss veritably shelters the throat-singing mocking bird, where

". . . The line of shadow and sunshine
Ran near the top of the trees
Swinging aloft on a willow spray that hung o'er the water,
Shook from his little throat such floods of delirious music
That the whole air and the woods and the waves seemed to listen."

TRIPS TO CUBA AND ELSEWHERE.

Regular steamers run to Cuba, leaving New Orleans Saturday and reaching Havana the Monday following. Rates to Havana and return: $50 for party not less than 20; there are no steamers that can accommodate more than 60 or 80 passengers.

The Galveston steamboats no longer ply, but river boats go to Natchez and to Vicksburg, and these are interesting trips for those who wish them.

Lookout Mountain, Tennessee—Excursion rate $25, good for 90 days; if large number goes special rate will be made.

River trip to Natchez, $12 round trip; Vicksburg, $16.

Sugar-Cane Fields.

Excursion to San Antonio, Texas: Dr. J. M. Head of San Antonio has arranged a special rate of $10 for the round trip from New Orleans to San Antonio and back, if 500 members will go. Stop-over privileges will be granted for any point along the line. The entire cost round trip for 3 days, including sleeper but excluding meals, will be $17. All desiring to take advantage of this trip are urged to correspond with Dr. Head at once.

New York steamers (Cromwell line) leave New Orleans every Wednesday.

MISCELLANEOUS.

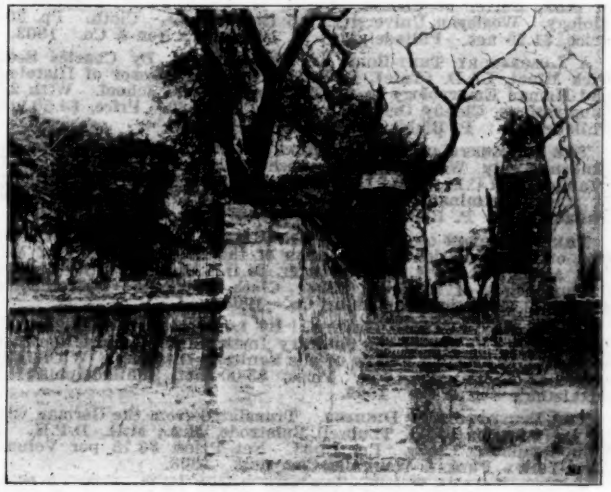
There is more than the detail of sightseeing that is interesting in New Orleans. Club life reeks with the glamour of provincial existence, and there is yet time to taste the flavor of *bien aise* after the tasks of the day are done. The stray sound of soft notes on some violin, or a gentle voice in song breathes on the night air in the springtime, and one misses quite the atmosphere of a truly great city.

Some day New Orleans will touch the higher planes of civilization, and what with modern play houses, sensational newspapers and rapid transit we may look in the near future to the destruction of some of the sentiments which still linger even in the every-day life.

Now and then the merry laugh in the tuneful voice of some gentle Creole, or the curious paraphrasing of simple English causes introspective reflection on the trend of the times, and it makes us wonder if after all the new way is really the best.

Congo Square has changed its name; the *vieux carré* is about to have the new court house and modern hotels, perhaps the postoffice, and that with the new paved streets will say good-by to the shadows which make the sentiment of the Crescent City—because they make the romances. Some old courtyards will remain, and in them the sacredness of their Latinity, but these will be like the atria of ancient Rome, full of the souvenir but barren of the spirit.

So what we may have left unsaid you will see for yourselves, for everyone makes his own pictures, and when the days are gone, besides the fruit gathered in the halls of science, we hope that you may carry away some-



Ruins at Old Spanish Fort.

thing besides the pictures and something besides the sights, for we of the Southland are like the children who beg the kindly stranger to love us just a little.

ISADORE DYER.

124 Baronne Street.

[FURTHER ANNOUNCEMENTS ARE MADE UNDER ASSOCIATION NEWS ON ANOTHER PAGE OF THE JOURNAL THIS WEEK.]

ACUTE ALUM POISONING.—Dr. Julius Kramolik reports the case of a young man, aged 30, who by mistake drank a swallow of an approximately 10 per cent. solution of alum which he had prepared as a gargle for a sore throat. Neither the mouth nor the throat showed any marked reaction to the irritant, but the patient vomited thirty-nine times within the forty-eight hours following. Palpation of the stomach was painful. Mucus was found in the vomitus, mingled with blood, imparting a chocolate color to the mass. The urine was stained by blood, and showed morphologically numerous red blood cells, few leucocytes and few hyaline casts. Traces of albumin were also present. The patient was ill at least thirteen days.—*Pester Medicinisch-chirurgisch Presse.*

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ANATOMY OF THE BRAIN AND SPINAL CORD, with Special Reference to the Grouping and Chaining of Neurones into Conduction Paths. For Students and Practitioners. By Harris E. Santee, M.D., Ph.D., Professor of Anatomy in the College of Physicians and Surgeons; with a Preface by William T. Eckley, M.D., Professor of Anatomy in the Medical and Dental Departments, University of Illinois. Third Edition. Revised and Enlarged. Cloth. Pp. 226—xxxvi. Price, $2.00 net. Chicago: E. H. Colgrove. 1903.

A SYSTEM OF CLINICAL MEDICINE, Dealing with the Diagnosis, Prognosis and Treatment of Disease for Students and Practitioners. By Thomas D. Savill, M.D. Lond., Physician to the West End Hospital for Diseases of the Nervous System. Volume I. Local Diseases and Microbic Disorders. Cloth, Pp. 702. Price, $4.38 net. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

PHYSICAL CHEMISTRY for Physicians and Biologists. By Dr. Ernest Cohen, Professor of General and Inorganic Chemistry in the University of Utrecht. Authorized Translation from the German. By Martin H. Fischer, M.D., Instructor in Physiology in the University of California. Cloth. Pp. 343. New York: Henry Holt & Co. 1903.

A POCKET BOOK of Infant and Childhood Dietetics, with Directions for the Home Modification of Milk. [Duplicate blanks, detachable, for giving to parent or nurse.] By A. B. Späch, A.M., M.D., Instructor in Medicine, Medical Department of the University of Illinois. Pasteboard. Price, $0.50. Chicago: E. H. Colgrove.

BACTERIA IN MILK AND ITS PRODUCTS, Designed for the Use of Students in Dairying and for All Others Concerned in the Handling of Milk, Butter or Cheese. By H. W. Conn, Ph.D., Professor of Biology, Wesleyan University. 43 Illustrations. Cloth. Pp. 306. Price, $1.25 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A LABORATORY TEXT-BOOK OF EMBRYOLOGY. By Charles Sedgwick Minot, LL.D. (Yale), D. Sc. (Oxford), Professor of Histology and Human Embryology in the Harvard Medical School. With 218 Illustrations, Chiefly Original. Cloth. Pp. 380. Price, $4.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

THE ELEMENTS OF PATHOLOGICAL ANATOMY AND HISTOLOGY for Students. By Walter Sydney Lazarus-Barlow, B.A., B.C., M.D. (Camb.), F.R.C.P. (Lond.), Pathologist and Lecturer on Pathology at the Westminster Hospital. Cloth. Pp. 705. Price, $6.50. Philadelphia: P. Blakiston's Son & Co. 1903.

THE EVOLUTION OF MAN AND HIS MIND. A History and Discussion of the Evolution and Relation of the Mind and Body of Man and Animals. By S. V. Clevenger, M.D., Author of the Medical Jurisprudence of Insanity, 1898. Cloth. Pp. 615. Price, $5.00. Chicago: Evolution Publishing Co. 1903.

HYGIENE AND PUBLIC HEALTH. By Louis Parkes, M.D., D.P.H., Lond. Univ., Fellow of the Sanitary Institute and Henry Kenwood, M.B., D.P.H., F.C.S., Fellow of the Sanitary Institute. With Illustrations. Cloth. Pp. 763. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

THE PREVENTION OF DISEASE. Translated from the German with an Introduction by H. Timbrell Bulstrode, M.A., M.D., D.P.H. In Two Volumes. Cloth. Pp. 1,063. Net Price, $3.75 per Volume. New York: Funk & Wagnalls Company. 1903.

REPORTS OF THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN. Volume II, Session of 1901-1902. Edited by George Carpenter, M.D. Cloth. Pp. 310. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co.

MATERIA MEDICA FOR NURSES. By John E. Groff, Ph.G., Apothecary in the Rhode Island Hospital. Second Edition, Revised and Rewritten. Cloth. Pp. 169. Price, $1.25 net. Philadelphia: P. Blakiston's Son & Co. 1903.

THE MANUAL TREATMENT OF DISEASES OF WOMEN. By Gustaf Norström, M.D., of the Faculty of Stockholm. Paper. Pp. 230. Price, $2.25. New York and London: G. E. Stechert. 1903.

THE INTERNATIONAL MEDICAL ANNUAL: A Year-Book of Treatment and Practitioner's Index. 1903. Twenty-third Year. Cloth. Pp. 739. Price, $3.00. New York: E. B. Treat & Co.

CHRONIC HEADACHE AND ITS TREATMENT BY MASSAGE. By Gustaf Norström, M.D., of the Faculty of Stockholm. Paper. Pp. 59. Price, $1.00. New York and London: G. E. Stechert. 1903.

BULLETIN OF IOWA INSTITUTIONS (Under the Board of Control) January, 1903. Published Quarterly. Paper. Pp. 141. Dubuque, Iowa: Telegraph-Herald Printing Co. 1903.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION. For the Year 1902. Volume XVIII. Cloth. Pp. 270. Philadelphia: Printed for the Association. 1902.

SUPERIOR BOARD OF HEALTH, San Juan, P. R. Rules and Regulations for Guidance of the Health Authorities. Paper. Pp. 93. Puerto Rico: Tip. Boletin Mercantil. 1902.

PROCEEDINGS OF THE SECOND ANNUAL MEETING OF THE MEDICAL AND SURGICAL ASSOCIATION OF MISSISSIPPI at Vicksburg, Miss., April 23 and 24, 1902. Paper. Pp. 18.

REPORT OF THE COMMISSIONER OF EDUCATION for the Year 1900-1901. Volume II. Cloth. Pp. 2512. Washington: Government Printing Office. 1902.

ALBUM OF THE FELLOWS OF THE AMERICAN GYNECOLOGICAL SOCIETY, 1876-1900. Cloth. Pp. 356. Philadelphia: Wm. J. Dornan. 1901.

THE TRANSACTIONS OF THE SOCIETY OF ANESTHETISTS. Volume V. Pp. 203. London: John Bale, Sons and Danielsson, Ltd. 1903.

The Public Service.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending March 28, 1903:

P. A. Surgeon W. B. Grove, detached from treatment at Naval Hospital, New York, and ordered to duty at Naval Dispensary, Washington, D. C.

P. A. Surgeon R. W. Plummer, detached from Navy Yard, New York, and granted sick leave for three months.

Asst.-Surgeon J. F. Murphy, detached from the *Glacier* and ordered to the *Monocacy*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended March 26, 1903:

Surgeon G. W. Stoner, to proceed to Washington, D. C., for special temporary duty.

Surgeon John Godfrey, Department letter of Nov. 22, 1902, granting extension of leave of absence for three months, amended so that said extension shall be for two months and twenty-five days from Dec. 13, 1902.

Surgeon F. W. Mead, granted leave of absence for five days from April 13.

P. A. Surgeon A. C. Smith, granted leave of absence for 15 days from April 8.

Asst.-Surgeon D. E. Robinson, granted leave of absence for two months and fifteen days from April 1.

Asst.-Surgeon J. W. Schereschewsky, granted leave of absence for one day.

Pharmacist R. H. Gibson, Department letter of March 18, 1903, granting leave of absence for twenty-three days, amended so that said leave shall be for eight days from March 9.

Pharmacist Carl Stier, granted leave of absence for one day, under paragraph 210 of the regulations.

PROMOTION.

Asst.-Surgeon M. H. Foster commissioned as passed assistant-surgeon to rank as such from March 11, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 28, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, March 14-21, 2 cases.
California: Berkeley, March 4-11, 1 case; Los Angeles, March 7-14, 4 cases; San Francisco, March 8-15, 6 cases.
Colorado: Denver, March 7-14, 22 cases.
Delaware: Wilmington, March 14-21, 1 death.
Florida: Jacksonville, March 14-21, 3 cases.
Illinois: Chicago, March 14-21, 12 cases.
Indiana: Elwood, Jan. 15-22, 7 cases; Indianapolis, March 7-21, 29 cases, 7 deaths.
Iowa: March 14-21, Davenport, 3 cases; Dubuque, 1 case.
Kansas: Wichita, March 14-21, 3 cases.
Kentucky: Newport, March 14-21, 1 case.
Louisiana: New Orleans, March 14-21, 4 cases, imported.
Maryland: Baltimore, March 14-21, 2 cases.
New Jersey: Camden, March 14-21, 2 cases.
New York: New York, March 14-21, 1 case.
Ohio: Cincinnati, March 13-20, 17 cases; Cleveland, March 14-21, 1 case; Hamilton, March 14-21, 1 case.
Pennsylvania: March 14-21, Altoona, 2 cases; Erie, 2 cases; Johnstown, 1 case, 1 death, imported; McKeesport, 1 case; Philadelphia, 26 cases, 1 death; Pittsburg, 29 cases, 4 deaths, imported, 3 cases.
South Carolina: Charleston, March 14-21, 5 cases, 1 death.
Tennessee: March 14-21, Memphis, 1 case; Nashville, 1 case.
Texas: San Antonio: Jan. 1-Feb. 28, 5 cases.
Utah: Salt Lake City, March 7-21, 53 cases.
Washington: Tacoma, March 1-16, 4 cases.
Wisconsin: Green Bay, March 15-22, 6 cases; Milwaukee, March 14-21, 2 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, Feb. 14-21, 2 cases, 1 death.
Brazil: Rio de Janeiro, Feb. 20-27, 5 deaths.
France: Lyons, Feb. 21-28, 1 death; Paris, Feb. 28-March 7, 1 death.
Great Britain: Feb. 28-March 7, Dublin, 5 cases, 1 death; London, 2 cases; Manchester, 19 cases; Sunderland, 1 case.
India: Bombay, Feb. 17-24, 74 deaths; Calcutta, Feb. 14-21, 6 deaths.
Mexico: City of Mexico, March 1-8, 9 cases, 5 deaths.
Straits Settlements: Singapore, Jan. 31-Feb. 7, 1 death.
Turkey: Alexandretta, Feb. 21-28, 3 cases.

YELLOW FEVER.

Brazil: Rio de Janeiro, Feb. 20-27, 40 deaths.
Colombia: Panama, March 10-17, 3 cases, 1 death.
Ecuador: Guayaquil, Feb. 14-21, 8 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Feb. 14-21, 68 deaths.
Straits Settlements: Singapore, Jan. 31-Feb. 7, 1 death.

PLAGUE—INSULAR.

Hawaii: Hilo, March 7, 2 deaths.

PLAGUE—FOREIGN.

Africa: Durban, to Feb. 23, 83 cases, 50 deaths; Pietermaritzburg, Feb. 26, 1 case.
Brazil: Rio de Janeiro, Feb. 20-27, 1 death.
India: Bombay, Feb. 17-24, 1,054 deaths; Calcutta, Feb. 14-21, 277 deaths; Mauritius, Feb. 12-19, 4 cases, 1 death.
Mexico: Mazatlan, to March 20, 313 cases, 254 deaths.